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PART FIRST.

ORIGINAL COMMUNICATIONS.

ART. I.—*Post-fascial Abscess Originating in the Iliac Fossa, with a New Method of Treatment.* By GURDON BUCK, M.D., Surgeon to the New York Hospital.

THE following cases are communicated to the profession, in the hope that some assistance may be afforded the surgical practitioner in the diagnosis of a class of abscesses which might easily be confounded with others, the prognosis of which is less favorable, and in which the same treatment might hasten the fatal termination to which they so generally tend. The particular mode of treatment adopted in these cases, it is believed, has not hitherto been generally employed. It was first suggested by a careful study of the surgical anatomy of the parts involved; and the successful results which have followed its use may claim for it a favorable consideration. The acknowledged difficulty attending the diagnosis of abscesses of the abdominal parietes must be our apology for the minuteness of our narrative, though to such as have had experience of this difficulty, no detail that may serve to clear it up will be regarded as unimportant.

Case 1.—John Roach, a seaman; native of Pennsylvania; æt. 32; was admitted into ward No. 12, Marine Department of the New York Hospital, on the 3rd of July, 1843, with a deep-seated phlegmonous swelling in the left iliac and inguinal regions, of four weeks standing. At the time of its appearance he had been already suffering for a fortnight from

inflammation of the lymphatic vessels of the lower limb of the same side, that had been followed by several small sub-cutaneous abscesses, the remains of which were still to be seen: five or six between the groin and knee, and three between the inner condyle and malleolus.

The swelling in the groin has, from its commencement, been attended with pain on moving the limb, and has gradually increased in size. It fills up the iliac fossa, so that the fingers cannot be buried in it along the inner margin of the crest of the ilium, as on the sound side. It also extends behind the outer half of Poupart's ligament, and, to a distance of four fingers' breadth below it, a superficial furrow crosses the swelling on a line with this ligament. Its inner limits can be traced from the middle of Poupart's ligament, where the femoral artery bounds it, upwards and outwards in a curved line, approaching within three fingers' breadth of the umbilicus. A general fullness of the parts on the surface, rather than a well-defined tumor, indicates its existence. The skin covering the swelling continues movable, supple, and unchanged in color. No increased heat is perceptible to the touch, though the patient himself is, at times, sensible of an increase in the temperature. An obscure, deep-seated fluctuation can be felt. There is constant pain extending to the hip, and down the thigh nearly to the knee. The thigh is kept semi-flexed on the trunk, and cannot be straightened out. Patient feels very weak, and has been deprived of sleep for a fortnight by nocturnal exacerbations of pain. His countenance is haggard and anxious; pulse 100, and weak; respiration somewhat laborious. Any movement of the limb or coughing aggravates the pain in the groin; his easiest position is on his left side. His belly is somewhat tympanitic, but supple. He has never had pain in the lumbar region, nor is there any tenderness on pressure there. His tongue is furred, dry in the middle, moist at the edges, and pale; appetite tolerable; bowels move spontaneously every second day. Ordered—poultices to abdomen, Magendie's sol. sulph. morph., gutt. xx, at bedtime.

July 5.—Opened the abscess in the following manner:—An incision, one inch in length, was made at a finger's breadth below the middle of the outer half of Poupart's ligament through the skin, sub-cutaneous tissue, and fascia lata; a probe was then passed deeply upwards and backwards; and, on being withdrawn, was followed by an escape of pus; whereupon the track of the probe was enlarged, and a free

outlet afforded for the contents of the abscess, with evident relief to the patient.

July 6.—Still more decided relief has been afforded by the continued free discharge of matter, and the limb can be moved with greater ease.

For about five weeks the suppuration from the abscess continued very abundant, with considerable febrile action, and, at times, free perspiration; his pulse averaged 120 per minute, and his strength became much reduced. Two or three attacks of cholera morbus, within the same period, contributed very much to aggravate his other symptoms. After this, the suppuration gradually diminished, and his general condition steadily improved. Early in September, the discharge had entirely ceased, and the opening closed.

On the 18th September, the patient was able to walk about. Some degree of fullness still remained in the left groin; the deep swelling in the iliac fossa, and behind and below Poupart's ligament, had very much diminished; and the suppleness of the superjacent tissues was, in a great measure, restored. The thigh, which had very much emaciated, was regaining its plumpness, and motion at the hip joint was every day increasing. A steady, progressive improvement was also taking place in his general health. On the 27th September he was discharged from the hospital, cured.

Case 2.—William Davis, æt. 37 years; a seaman; native of the Sandwich Islands; of robust appearance; was admitted into the New York Hospital November 27, 1845, with a prominent tumor occupying the left iliac and inguinal regions, and extending laterally from the anterior superior spinous process to within four fingers' breadth of the root of the penis. In this direction it presented its longest diameter; its upper and inner margin approaches within four fingers' breadth of the umbilicus. Inferiorly, it somewhat overhangs Poupart's ligament, and is limited at its outer circumference by the crest of the ilium. The circumference of the tumor, towards the median line, is gradually lost in the surrounding surface, while its summit stands out in relief about two inches. The integument covering it is supple, without adhesions, without increased heat or discoloration.

The tumor itself is elastic, fluctuating, closely bound down at its circumference, and not admitting the fingers to be insinuated under its base, at any point. By grasping the tumor and crowding it backwards and downwards, its con-

tents are made to transmit an impulse behind and below the outer half of Poupart's ligament. This impulse is felt to a distance of nearly two inches below the ligament; on the surface, however, no external swelling is perceptible in this situation. A slight impulse is communicated to the swelling by coughing. In the erect position, it becomes somewhat more tense than in the recumbent; no translucency exists; no gurgling; no functional disturbance of the bowels; no pain is occasioned by handling it nor by the motions of the thigh upon the trunk. The neighboring lymphatic glands are slightly enlarged, but not tender. The patient is under no restraint in moving his body in any direction, and feels able to perform any sort of work. There is no tenderness on pressure over the lumbar region or along the spine. The spermatic cord is felt at the inner margin of the tumor, supple, and in a normal condition.

The previous history of this case, so far as the patient's imperfect knowledge of the language permitted it to be ascertained, was as follows:—The tumor first appeared about four months ago, while he was at hard work on board a vessel. A feeling of soreness drew his attention to the part when the swelling was discovered, of the size of a hen's egg. For one week he gave up work and kept below, and then, of his own accord, resumed his duties. The swelling attained its present size in about a month, since which it has remained stationary. His general health is apparently good, and his strength unimpaired. Pulse somewhat accelerated, and tongue coated with a yellowish fur.

The extension of the tumor downwards behind and below the outer half of Poupart's ligament, as evinced by the transmission of fluctuation to the superior and outer part of the thigh when pressure was made above, warranted the conclusion that the collection of fluid was situated behind the iliac fascia.

From the anatomical conformation of this region, it was impossible for any collection of matter developed more superficially to make its way behind the outer half of Poupart's ligament. Though the great prominence of the tumor, and the entire absence of all signs of inflammatory action, together with the freedom of motion of the thigh, were features which cast doubt on its nature; still the fluidity of its contents was apparent, and the necessity of their evacuation clearly indicated. In this case, the mode of opening to be preferred was the same as in the preceding one. Such,

however, was not the judgment of the attending surgeon in charge of the patient. An incision was made, of five or six inches in length, across the most prominent part of the tumor, and parallel with Poupart's ligament. After carefully dividing the skin and sub-cutaneous tissues, layer by layer, the knife suddenly penetrated the cavity of the swelling, and gave vent to about a pint of thin, ill-conditioned, scrofulous matter, of a brownish color, intermixed with particles of curdy substance. The opening being further enlarged, the fingers were introduced into the cavity of the abscess and passed downwards behind the outer half of Poupart's ligament, to the extent to which the fluctuating impulse was felt before the operation.

This feature fully substantiated the opinion formed respecting the seat of the matter. No denuded bone could be detected in the iliac fossa.

December 27.—Up to this date, the patient's general health continued good; the discharge was small in quantity, and of good appearance. A small abscess pointed below Poupart's ligament and opened. In the further progress of the case, however, symptoms of phthisis supervened, with cough, hectic, and gradual emaciation. The abscess continued open.

April 3, 1846, he was discharged at his own request.

Case 3.—Benjamin C. Smith, æt. 54 years; a native of the State of New York; seaman; with fair complexion and sandy hair; entered the hospital on January 13, 1847, with unhealthy sloughy ulcers on the nape of the neck, that had been preceded by undermining abscesses. Soon after admission, erysipelas supervened, involving the face and scalp, and followed by abscesses in the eyelids, and extensive undermining suppuration of the scalp. While gradually convalescing from the low cachectic condition thus induced, he began, early in the month of March, to complain of pain in his left groin, and inability to straighten out the thigh. At the same time his appetite fell off; he became feverish, and his general condition deteriorated.

March 15.—On careful examination of his groin, a deep swelling, tender, and painful on pressure, was felt behind the outer half of Poupart's ligament, and extending upwards and occupying the iliac fossa. Its surface could be traced along the inner margin of the crest of the ilium, and in such close contact with it as not to allow the fingers to be buried at all in the fossa. The swelling also extended below Poupart's

ligament two or three fingers' breadth distance; along the inner margin of the swelling, the femoral artery was felt. Fluctuation was perceptible below the outer half of Poupart's ligament, when deep pressure was made over the iliac fossa above. The skin and subjacent tissues covering the swelling were still supple and unadherent, and the surface free from heat or redness. On comparison with the sound side, an increased degree of fullness was observable. The thigh was kept flexed at an angle of about 145° with the trunk, and could not be extended to the straight position. Stinging pains occasionally extended down the thigh, but more particularly when the swelling was handled.

An incision was made, as in Case No. 1, down through the fascia lata, and a grooved exploring needle passed upward and backward to the depth of about two inches, when a few drops of pus escaped along the groove. The opening was then enlarged, and a quantity of matter evacuated. Two ligatures were applied to a small artery that was divided by the incision.

March 17.—Great relief has followed the opening of the abscess. The outlet having become blocked up, a female catheter was introduced, and a large discharge followed. The catheter could be passed in nearly its whole length, and came in contact with denuded bone. The thigh can be extended almost to its full degree. General condition favorable—no fever.

March 25.—The discharge of pus continues, but has diminished in quantity. Generous diet and tonics are allowed.

April 5.—The abscess has ceased to discharge, and the patient is rapidly gaining in health and strength.

April 26.—He was discharged cured, with the abscess closed.

Case 4.—Robert Brown, æt. 40 years; native of Ireland; shoemaker; was admitted into the New York Hospital, January 11, 1851, with compound comminuted fracture of the right leg, involving the ankle joint, that had happened just before admission, while in a state of intoxication. On the 29th of the same month, amputation below the knee was performed. On the 9th of April, when the stump had nearly healed, and patient's general condition become tolerably good, my attention was first called to a soreness in the right groin and iliac region. He had previously complained of this part; and from superficial examination, it was supposed to depend upon inflamed lymphatic glands, caused by the

sore of the stump, and for which blisters had been applied. A careful examination being now instituted, it was ascertained that the iliac fossa was filled up by a deep-seated hard swelling, extending down behind Poupart's ligament, and confined to its outer half. The femoral artery could be distinctly felt skirting the inner margin of the swelling. The fingers could not be buried in the fossa, nor embrace the crest of the ilium, or the anterior superior spinous process, as could readily be done on the opposite side. No fluctuation could be distinguished, nor was there any redness of the surface, nor œdema of the subcutaneous tissue, nor increased heat. Pressure gave pain at every point where the swelling could be reached. The outer half of Poupart's ligament was tense and unyielding, while the inner half retained its natural suppleness. The swelling could not be distinguished much below the ligament. Flexion of the thigh caused no pain, but extension did when carried to an extreme degree. There was no pain in the lumbar region, nor had there been at any time. The patient, who was of a weak constitution, and had had symptoms of phthisis, dated back the origin of this ailment three months prior to the accident to his leg. He could assign no other cause for it than that he had strained the part, while engaged in piling wood, being obliged at the time to stand on tiptoe and place the wood as high as he could possibly reach.

Operation.—An incision being made as already described, the fascia lata was found tense and unyielding. A trochar exploring needle in a canula was passed upwards and backwards, and soon arrived in a free cavity, from which pus escaped through the canula. After enlarging the track, a tent was introduced and a poultice applied. Generous diet, cod-liver oil and quinine were given.

May 4.—The discharge from the abscess is decreasing. Strength is good, and patient able to sit up.

May 28.—The discharge having become thin and scanty, ceased three days ago. A firm, circumscribed tumor, about the size of a hen's egg, is still felt in the iliac fossa.

May 29.—The patient was discharged cured.

Several months subsequent to leaving the hospital, he reported himself in good condition.

Case 5.—Mrs. B., æt. 25 years; a lady of delicate constitution, residing at No.— Pike street; is a patient of Dr. I. W. and has a deep swelling in the left groin, filling up the iliac fossa and extending down behind Poupart's ligament, but

confined to its outer half. A fullness, rather than a defined swelling, is all that is observable on the surface. The femoral artery skirts its inner margin. The presence of the swelling prevents the ends of the fingers from being buried in the fossa, along the crest of the ilium, or at the anterior superior spinous process, though this can readily be done on the opposite side. The integument covering the swelling is free from redness or heat, and retains its natural suppleness. The subcutaneous cellular tissue is also free from œdema and induration. No fluctuation can be perceived. Deep pressure causes pain wherever the swelling is within reach; the outer half of Poupart's ligament is tense and unyielding. About a hand's breadth lower down on the thigh and towards its inner margin, the skin is œdematous, indurated, and somewhat swollen over a space of about five inches in circumference; this has appeared within a few days, and is disconnected from the swelling above. The thigh is kept flexed at an angle of about 135° with the body, and attempts to extend it cause pain in the swelling. Two months prior to my first visit (on March 30, 1852,) Mrs. B. had been confined with her second child, after an ordinary labor. On the second day following her confinement, she was seized with a severe rigor and pains in the lower part of the abdomen, accompanied with tympanitis and a rapid pulse, which led Dr. W. to apprehend an attack of puerperal fever. Purging, etc., without the aid of blood-letting, subdued these symptoms. In a short time, however, she began to be seized with chills, which recurred at irregular periods, sometimes twice within twenty-four hours, and were followed by fever of short duration and profuse perspiration. At the expiration of between three and four weeks after confinement, her left thigh began to be drawn up, so that, in attempting to walk across the room she was obliged to lean her body forward, and was unable to stand erect with her foot touching the floor. She experienced, however, no pain in the groin, nor has she, to the present time. Her countenance is pale and languid, and her pulse feeble. She has at no time had pain in the lumbar region, nor is there tenderness on pressure over this part. The absence of fluctuation was the only feature which made me hesitate in regard to the existence of matter behind the iliac fascia; all the other symptoms, general as well as local, were unequivocal. On careful inquiry, no connection could be established with the lumbar region or colon, as the point of departure of this phlegmonous swelling. Flax-seed poultices were advised, and kept constantly applied until

April 3.—When it was decided to make an explorative puncture. An incision was made, as in the preceding cases, below the outer half of Poupart's ligament, through the integument and subjacent tissues, down to the fascia, which was found tense and unyielding. A small sized trochar exploring needle, sheathed in a canula, was passed upwards and backwards behind Poupart's ligament, and soon arrived in a free cavity. The needle being withdrawn, matter escaped through the canula. Before withdrawing the canula, a narrow-bladed knife was passed up by the side of it, and the track enlarged to afford a free outlet. A tent was then inserted, and poultices directed to be continued. The tonic and supporting treatment, already in use, was also continued.

April 7.—The use of the tent, which had been changed daily, was laid aside. The discharge was moderate in quantity, and the patient's condition was gradually improving. The subsequent progress was favorable. At the expiration of about six weeks, the opening had closed, and the patient was able to ride and walk out.

Case 6.—Mary Ann T., æt. 12 years, a girl of pale complexion and very delicate appearance, whose father had been of a very scrofulous constitution, suffered in the month of May, 1853, from a large abscess that formed spontaneously in the axilla, and which, after being opened, discharged very copiously for some time. After a gradual recovery, she enjoyed a comfortable state of health until the month of August following, when she began to complain of pain in the right hip and groin. Two or three weeks after this, she was observed to walk lame, with the thigh retracted, and to have hectic fever at irregular periods. On the 22nd of November following, she was first examined at her residence, No. 193 West 25th street, and the following particulars ascertained:—The right thigh was kept flexed upon the trunk, and adducted toward its fellow. The body inclined to the opposite side and caused a notable projection of the lame hip, suggesting at once the suspicion of hip disease; the motion of the joint, however, was found free, and unattended with pain or swelling about the trochanter; attempts to extend and bring down the thigh, however, caused pain in the region of the psoas and iliacus muscles. There had been at no time pain in the lumbar region, nor was there any tenderness on pressure in this part. She was still able to walk, by stepping on her toes, and inclining her body forward, taking care to maintain it always at the same angle

with the thigh. In the recumbent position, a swelling was recognized in the right iliac fossa, closely hugging the crest of the ilium and the outer half of Poupart's ligament, so that it was impossible to bury the ends of fingers in the fossa, or to grasp the anterior superior spinous process between the thumb and fingers, or to depress the outer half of Poupart's ligament. The inner margin of the tumor could be traced from the middle of Poupart's ligament upwards and backwards in a line corresponding to the superior strait of the pelvic cavity. There was no redness of the surface, nor adhesion of the skin to the subjacent tissues, nor œdema, nor elevation of temperature. A moderate degree of fullness was observable at and above Poupart's ligament. Deep pressure caused pain. The perception of fluctuation was obscure and doubtful. Her pulse was habitually frequent, and her countenance wore an anxious expression. She still retained a good degree of strength. Directed poultices to the swelling. Repeated examinations having corroborated the condition above described, and confirmed my opinion of the existence of a collection of matter behind the iliac fascia, an opening was made on the 28th of November, in the presence of Drs. Van Buren and Halsted, and Mr. H. D. Noyes, pupil. This was performed, as in the preceding cases, and a grooved exploring needle passed upwards and backwards nearly two inches, when matter escaped. After incising the opening, and giving vent to a large quantity of thick pus, a tent was introduced; a copious suppuration succeeded. Poultices were kept applied, and cod-liver oil and syr. iodide of iron were administered for several weeks; also super-sulphate of quinine, with generous diet and malt liquors.

On the 4th of March, 1854, I found my patient had already been walking about for several weeks; the discharge had become reduced to a small quantity of thin matter. She had almost regained the power of holding the body erect with the foot applied flat upon the floor; hardness continues in the seat of the tumor. She survived till the 23rd of November following. The discharge continued from the groin, sometimes abundant, and at other times scanty and thin. An attempt was made to use injections of a weak solution of the bi-chloride of mercury, by means of a gum elastic catheter introduced into the remotest part of the abscess; but this was rendered impossible by her extreme timidity and uncontrollable intractability. Gradual emacia-

tion took place, and progressed to an extreme degree. She kept up till within a few days of her death, and was at last exhausted by a profuse diarrhœa. No examination of the body could be obtained.

Case 7.—John Burr, æt. 27 years; native of New York; boatman; entered the New York Hospital on the 15th of March, 1855, with an inflammatory swelling in the right iliac region, of which he gave the following history:—About six months ago, without injury or other obvious cause, he began to notice a swelling on the inner side of the middle of the crest of the ilium, accompanied with pain and inability to straighten the thigh to its full extent on the trunk. These symptoms passed off, and again recurred, according to the patient's recollection, once in about two or three weeks. He was not obliged, however, to give up his occupation, or to keep in the house until within eight or ten days of his admission. At this time, the following was observed:—The lower and right portion of the abdomen was swollen and prominent; the swelling was limited below and to the outside by the crest of the ilium, and the outer two-thirds of Poupart's ligament, with which parts it was so closely connected, that it was impossible to insinuate the ends of the fingers between them and the swelling, although this could easily be done on the opposite side. Toward the umbilicus, the swelling was gradually lost, and its limits could only be defined by percussion, which was dull for about two-thirds of the distance from the ilium to the umbilicus. The line of dullness receded farther from the umbilicus as it was traced upwards and outwards. The abdominal muscles on the right side were kept in such a state of tension as to prevent the limits of the swelling from being felt by deep pressure. The integument covering the swelling had undergone no change in color, but had lost its suppleness, and was movable only to a limited extent on the subjacent tissues. Deep pressure with the ends of the fingers disclosed the existence of œdema and tenderness over every part of the swelling, especially in the neighborhood of the anterior superior spinous process. Poupart's ligament was evidently pushed downwards, as well as forwards; its inner half retained its natural suppleness, while its outer half was tense and unyielding. No fluctuation was perceptible. The thigh was kept flexed upon the trunk and somewhat adducted, and could not be extended without causing pain in the swelling. When the patient stood up, he inclined his body

forward, so as to keep his groin relaxed. On careful inquiry, it was ascertained that there had not been any pain or lameness in the lumbar region. The patient had generally enjoyed good health, was free from fever, though his pulse was somewhat accelerated. Six leeches were directed to the swelling, to be followed by poultices.

March 19.—Patient had a smart rigor, followed by a fever. The swelling appears to have somewhat increased, and become much more painful; the pain spreading upwards, towards the false ribs, and around the body. Made an explorative puncture below the outer half of Poupart's ligament, in the same manner as already described, and reached a cavity in the iliac fossa, containing pus. Five or six ounces were evacuated, of a grayish color, and fetid odor. Poultices directed to be continued.

March 21.—Patient has experienced great relief since the evacuation of the matter. The swelling has somewhat subsided, so as to render the prominences of the crest and the spinous process of the ilium more visible. The dullness has disappeared to within a finger's breadth of the crest of the ilium, and Poupart's ligament. The discharge continues free, and the thigh still flexed.

March 27.—A large slough came away from the abscess, and a slight blush of redness extends about a hand's breadth around the opening; the discharge is free; he has had no chill; is allowed tonics and good diet.

This patient remained in the hospital, under treatment, for several months. The abscess continued to discharge more or less, without interruption. About the middle of April, he had an attack of acute pneumonia of the right lung, from which he gradually recovered.

May 26.—Began injecting the abscess with Lugol's solution of iodine, and repeated it every third day until the 27th June, without benefit.

July 7.—A small slough appeared at the orifice of the abscess; and, after its removal, a hard substance was encountered, about one inch deep, which, on being withdrawn, proved to be a pin of ordinary size, encrusted with biliary concretions, except at its head and point. The body was of the size and form of a small olive, with a rough, uneven surface. He had no recollection of ever having swallowed a pin.

July 14.—Air escaped from the abscess. The discharge fluctuates in quantity, and sometimes has a fæcal odor. The thigh is still retracted.

August 9.—He was discharged from the hospital, and went into the country. In October, after his return from the country, the abscess still continued to discharge. The subsequent progress of his case was not ascertained.

Remarks.—Of the seven cases reported above, five were males, and two females. Their ages ranged from twelve to fifty-four years. In four of their number, the disease occupied the left side; and in three, the right. In one of the two female patients, the disease occurred during the puerperal state.

Anatomy.—The importance of an accurate knowledge of the relative anatomy of the parts involved in this form of abscess will be admitted, if it is remembered that both the diagnosis and treatment are based upon it.

The crural arch, which is spanned by Poupart's ligament, is divided into two halves, by a strong process of aponeurosis, sent off posteriorly from the middle of this ligament, and inserted into the ileo-pectineal eminence. The inner half serves for the passage of the great blood vessels, lymphatics, etc.; the outer for the psoas magnus, and iliacus internus muscles, and crural nerves. The fascia iliaca, of which the above process is also a continuation, is a strong aponeurosis, which is continuous upward with the outer half of Poupart's ligament, and spreading out over the anterior face of the iliacus and psoas magnus muscles, is inserted outwardly into the inner margin of the crest of the ilium, and inwardly into the linea ileo-pectinea. It is also prolonged upwards upon the psoas, as high as its origin from the lumbar vertebræ. Below Poupart's ligament, and continuous with it, the fascia lata covers the psoas and iliacus, in common with the other muscles of the thigh, and, at the inner margin of these two, gives off posteriorly a septum, which is continuous above with the process of aponeurosis, already described as inserted into the ileo-pectineal eminence. Now, if an incision be made parallel with Poupart's ligament, and below its outer half, down through the fascia lata, the psoas and iliacus muscles will be exposed, and the fingers can be passed upwards behind Poupart's ligament so as to arrive in the fossa, behind the iliac fascia. The same track can be followed from above downwards, by incising the iliac fascia transversely, and passing the fingers downwards behind it and the outer half of Poupart's ligament, till they arrive on the anterior face of the thigh. Here, then, we have a well-defined track, bounded posteriorly by a bony surface, anteriorly by a strong fascia,

and shut in on either side by the insertions of the fascia into the bone. Suppuration taking place in this track could only reach the surface through the fascia, by the slow and gradual process of ulceration and absorption.

Pathology.—The able author of an article in the *British and Foreign Medical Review* (page 456, April No. for 1840,) remarks "An abscess in the cellular tissue of the right iliac fossa, when it does not result from a blow or external wound, from perforation of the appendix or cœcum, or from childbirth, is, we believe, in almost every instance, the consequence of disease of the bones, either of the back or pelvis. There may be cases in which an abscess forms in the iliac fossa from idiopathic inflammation of the cellular tissue, but we have never seen one." Several of the cases narrated above, prove, as we believe beyond a doubt, that suppuration may take place in the iliac fossa behind its fascia, unconnected with caries of the lumbar vertebræ or pelvis, or morbid lesions of the cœcum or colon. There is no reason why the cachectic condition, upon which the formation of abscesses depends, may not manifest itself in this particular region as well as in any other of the body. The functions of the psoas and iliacus muscles render them liable to the injurious effects of over-straining efforts, and such efforts may be the exciting cause of suppurative inflammation in the cellular tissue surrounding these muscles, especially where a general cachectic condition co-exists to favor it. Such seems to have been the fact in Case No. 4.

Causes.—In Case No. 1, the irritation was propagated in the course of the absorbent vessels, which had recently been the seat of inflammation, resulting in numerous small subcutaneous abscesses along their track from the inner ankle to the groin.

In No. 2, which was a remarkable example of cold abscess, the patient, though apparently in good health when the abscess was *opened*, exhibited subsequently all the signs of tubercular cachexia.

In No. 3, a low cachectic condition, induced by copious suppuration following erysipelas of the face and scalp, coincided with the development of suppurative inflammation in the iliac fossa, without any obvious exciting cause.

In No. 4, after violent efforts, by which the psoas and iliacus muscles were over strained, pain and lameness first seated themselves in the iliac region; and at length, while

the system was suffering under depressing influences, suppuration developed itself.

In No. 5, the only case of an adult female, the disease originated in the puerperal state.

In No. 6, the patient's whole aspect was expressive of a hereditary scrofulous diathesis, which had manifested itself previous to the suppuration in the iliac region, by the development of a large abscess in the axilla.

In No. 7, the escape of a foreign body from the intestine (probably the cœcum) first excited suppurative inflammation, and its protracted sojourn in the abscess perpetuated its continuance for a long period.

Diagnosis.—Other forms of abscess, besides the one in question, are found located in the iliac region, which it is important to distinguish.

1. In this, as in other regions of the abdomen, suppuration may take place in the muscular parietes, or in the cellular tissue between the muscles and peritoneum. Such an abscess would not, however, be confined within the same precise limits; nor, in case it was seated in the cellular tissue of the fossa anterior to its fascia, could it extend behind or below Poupart's ligament. Retraction of the thigh would not be produced by it, and adhesion of the skin and subjacent tissues, as well as redness and inflammatory œdema, would take place early in its progress.

2. Abscesses form in consequence of perforation of the vermiform process and cœcum. The suppuration in this case is commonly confined by adhesions between the peritoneal surfaces of the intestines and parietes, and the tumor produced is not confined within the same anatomical limits as the abscess in question. The same deviation from the anatomical characters already so often insisted on, is observable in abscesses produced by fæcal obstruction, as well as those that are developed in the appendages of the uterus during the puerperal state.

3. Ordinary psoas abscess, which is understood to depend on disease of the vertebræ, may and does, in its descent along the psoas muscle, sometimes keep behind the iliac fascia, and occupy the same track as the idiopathic abscess; but its connection with the vertebræ can be readily ascertained by careful inquiry.

4. The question may arise, whether caries of the os ilii itself may not cause suppuration in the fossa, and present a swelling confined within the same anatomical limits. Doubt-

less it may, and so also may a fracture of the ilium. The author believes he has seen such an example after fracture, where, besides other abscesses around the pelvis, one formed and occupied exactly the limits of the fossa, and was evacuated by an opening made below Poupart's ligament.

The true post-fascial abscess originating within the iliac fossa from idiopathic inflammation of the cellular tissue, may be described as follows:—It presents itself, though much more rarely, in a chronic as well as acute form, and locates itself in either the right or left iliac region. Though it may occur in early youth, it is most frequently met with in adult age, and affects alike both sexes. The tumor which it forms rises up from the hollow of the ilium, pushing before it the fascia and outer half of Poupart's ligament, so that the crest of the ilium and the anterior superior spinous process can no longer be grasped between the thumb and fingers. The outer half of Poupart's ligament is rendered tense and unyielding, and a deep-seated induration may extend two or three fingers' breadth below it. The precise limits of the swelling can only be appreciated by the touch and percussion over its abdominal portion; upon the surface the eye only perceives a fullness or a diffuse swelling of these parts. No increased heat or redness of the skin existed in either of the cases above narrated. In four of them (Nos. 1, 4, 5, and 7), no fluctuation could be detected; in two (Nos. 3 and 6), it was obscure and doubtful; while in one only (No. 2, the cold abscess), it was unequivocal. In all (except No. 2), the thigh was retracted, and attempts to straighten it caused pain. In all the cases (except No. 2), constitutional disturbance and fever accompanied the local disease. In all the acute cases, the absence of heat, redness, adhesions, œdema, and also of fluctuation in three of them, is to be attributed to the remoteness of the abscess from the surface, and its confinement beneath the fascia.

Treatment.—The treatment of abscesses in the iliac region, laid down by surgical authorities, does not differ materially from that of abscesses situated elsewhere. Means suited to produce resolution of the inflammation and prevent suppuration are advised in the early stage. When these have failed, such means as will hasten the approach of matter to the surface, and thus afford an opportunity to evacuate it by an opening, are then to be resorted to. In this form of abscess, the first object would be very rarely attained, owing

to the remoteness of the seat of inflammation from the surface and its confinement beneath a strong and tense fascia. For the same reason, the approach of suppuration to the surface would be very tardy, and hence great danger might be apprehended from the injurious effects of long pent-up matter, such as caries of the os ilii, as was threatened in Case No. 3, where denuded bone was encountered at the bottom of the abscess; also, deep burrowing along the walls of the pelvic cavity and openings into the peritoneum, intestines, vagina, and bladder. With the view of averting these disastrous consequences, a point was sought where an opening might be early established for the escape of the suppuration. The point selected possesses the advantage of safety in respect to its anatomical relations, it being remote from the peritoneum and important blood vessels; it affords, also, the most dependent outlet. The mode of performing the operation has been sufficiently described in the preceding narrative. No time should be lost in resorting to it; the absence of fluctuation need not deter from it. The phlegmonous character of the swelling; its anatomical relations to the iliac fossa and Poupart's ligament; the absence of disease of the lumbar vertebræ, and the coexisting retraction of the thigh; these points being clearly made out, are sufficient to warrant the conclusion that suppuration has taken place in the fossa behind the fascia.

It is hardly necessary to add that the approved auxiliary means of abating inflammation, such as leeches, poultices, etc., together with appropriate constitutional remedies, are not to be omitted.

No. 121 Tenth Street, February 2, 1857.

Art. II.—*Sketch of the History of the College of Physicians and Surgeons of the University of the State of New York. Taken from an Address delivered on the occasion of the Opening of the New Building of the Institution, on the corner of Twenty-third Street and Fourth Avenue, January* 22, 1856. By Edward Delafield, M.D.

[The address delivered by Dr. Delafield, on the occasion of the opening of the new building of the College of Physicians and Surgeons in last year, contains so much of historical interest connected with the profession in our city which might not otherwise be placed on record, that we feel that free

extracts from it cannot prove otherwise than acceptable to our readers, and have therefore transferred a large portion of it to our pages.]—*Eds. N. Y. Jour. Med.*

A history of the College of Physicians and Surgeons is a history of medical education in the city of New York; for, although it was not the first institution in which medicine was here taught, previous attempts had met with so little success, as to be more important as having given origin to the school, than supplied in themselves the object in view. As long ago, indeed, as the year 1768, while our state was still one of the colonies of Great Britain, a medical school was established, in connection with the college of the province, then called King's College; but which, since the revolution, has borne the name of Columbia College: and the learning and talent of its first professors were of no mean order. Dr. Samuel Clossy, was first Professor of Anatomy; Dr. John Jones, of Surgery; Dr. Peter Middleton, of Physiology and Pathology; Dr. James Smith, of Chemistry and Materia Medica; Dr. John V. B. Tennent, of Midwifery; and Dr. Samuel Bard, of Theory and Practice of Physic.

Every branch of medical science now taught was, even at that early day, provided for; and the learned men who filled the professors' chairs will not lose by comparison with those who have succeeded them. Nor were the founders of the medical college less aware than ourselves of the necessity of clinical instruction, and of the observation of disease itself, by those who would treat and hope to cure it when called into the profession. At the medical graduation in 1769, Dr. Samuel Bard delivered a public address, pointing out the necessity and advantage to medical education of a public hospital; and so admirable was this discourse, and so convincing to its hearers, that, upon the very day it was delivered, the Governor of the Province set on foot a subscription for its establishment. The sum of £800 sterling was subscribed by individuals, and in a very short time the corporation of the city added £3000 to the fund. This was the beginning of the New York Hospital, an institution devoted equally to the relief of suffering humanity and the promotion of medical science. Its present condition we all know. It is second to none at home or abroad, and its Governors have the proud satisfaction of knowing that they have improved the institution under their charge, until it has become a model which may well be imitated by any other public hospital.

But when the war of the revolution broke out, the building for the New York Hospital was not completed; nor were its objects carried into execution until January 3, 1791, when it was opened for the reception of patients. The medical college shared the same fate. Its professors were scattered abroad; the lectures suspended, and finally abandoned. The school was never reorganized under the same professors, and New York remained without one for some years after the revolution. Some attempts were indeed made, and a medical school was organized, and professors appointed; but it did not go into operation, and no lectures were given.

On the 13th April, 1787, the Legislature passed an act establishing the University of the State of New York, and appointed twenty-one of its principal citizens Regents of the University. Under this act the present Board of Regents was organized, and held its first meeting at the Exchange, in this city, on the 17th July, 1787. But for several years they took no interest in the subject of medical education, and nothing was done.

It was not until February, 1791, that the Regents took any note of medical matters; and then the subject was brought before them by a petition from Dr. Nicholas Romayne, who may, therefore, be considered as the originator of the first medical school after the revolution; and it was this memorial of Dr. Romayne, which, in its consequences, laid the foundation of the College of Physicians and Surgeons of the State of New York. He stated in his petition, that lectures on all the subjects essential to medical education had already been given in the city in a college instituted by himself, and that the corporation of the city had committed "to his charge the sick in the almshouse and bridewell, whose diseases are registered, together with daily report of the symptoms, the prescriptions and effects of medicines, for the farther improvement of the students of physic; and that clinical lectures are delivered once every week on cases selected from the number of the sick." Here then were all the elements of a medical school, and this was the first attempt in any part of our country at giving clinical instruction, now deservedly deemed so important a part of medical education.

The subject was taken up in earnest by the Regents, and a committee appointed to visit Dr. Romayne's College, who reported favorably on his petition. But, even at that early

day, the seeds of discord had already been sown among the physicians of New York; and, first, a counter petition from the medical society of the state was presented, and afterwards a movement in Columbia College defeated Dr. Romayne's plans.

Eventually, Columbia College succeeded in organizing a medical faculty; and on the 14th February, 1792, the professors were appointed. The faculty was a strong one; it included Dr. Bard, Dr. Bailey, Dr. Nicoll, Dr. John R. B. Rodgers, Dr. William P. Smith, Dr. Post, Dr. Hamersley, and Dr. Richard S. Kissam; and this became the state school, acknowledged by the Regents, although not established by their authority. But Dr. Romayne, although first to originate a medical school in the city, did not join with Columbia College, and retired from medical teaching until several years afterwards.

The first grant of money by the Legislature in aid of medical education, was made in March, 1797. Dr. Post having gone to Europe for the purpose of collecting an anatomical museum and preparing himself to lecture on anatomy, brought out with him a very valuable collection, the foundation of that now in the College. It was for the preservation and enlargement of this collection, that the grant was made; the sum of $500 annually, being appropriated by the Legislature for this purpose.

The school thus organized, although it started with bright prospects, had but moderate success. Its classes never reached seventy students, and after a time they even fell off materially from that number; and only thirty-five students received the honors of the college from its foundation, until the year 1811.

It was, no doubt, this want of success in the medical faculty of Columbia College which encouraged others to come forward and attempt to do better. In 1806, the law establishing county medical societies, and also a state medical society, was passed; and on the 3rd March, 1807, the New York County Medical Society presented a memorial praying an act of incorporation as a College of Physicians and Surgeons, under the patronage of the Regents of the University; and accompanying this was a communication to the Regents from Dr. Romayne. I have already stated his failure in attempting to establish a medical school in this city, although he was the first to propose it. He now came forward with much more influence as President of the New York County

Medical Society. As before, he met with powerful opposition, both from members of the society, and Columbia College; but his energy and perseverance overcame all obstacles, and he succeeded, with his associates, in obtaining a charter from the Regents, which was granted on the 12th March, 1807. And thus commenced the first legal existence of the College of Physicians and Surgeons of the University of the State of New York, the title it still continues to bear; and it is for this institution we have prepared the building in which we this day are assembled.

The charter enacted that all persons who were at that time members of the Medical Society of New York, and all physicians and surgeons then resident in the county of New York, and authorized by law to practice medicine, should be trustees or members of the new college; and that their successors should continue to perform the same functions. The machinery of the government of the college, as thus constituted, was evidently too cumbersome to work well; and this became so evident, that we find the Regents, the very next year, enacting that the power to elect the President, Vice-President, Registrar, Treasurer, and thirteen Censors, in whom the government of the college was more immediately vested, should no longer be exercised by the County Medical Society, but by the Regents themselves; and these offices were to be held during the pleasure of that body. The number of persons first incorporated as trustees was more than one hundred, and included all who had any pretensions to medical skill in practice.

Such a body as this, as it soon appeared, was in every way unfit for the management of a seminary of learning, and it was not surprising that in so short a time the Regents found it necessary to take the college out of its hands, and entrust it to a more limited and select number of persons.

The County Medical Society were still the college, and its members trustees, but under the new arrangement their powers were so limited as to be almost nominal. The immediate government was vested in a Senatus Academicus, consisting of the President, Vice-President, Registrar, Treasurer, and Professors, who derived their authority directly from the Regents.

But faulty as was its first organization, the college was thus fairly established; on the 5th May, 1807, the following officers were elected by the trustees:—Nicholas Romayne, M.D., President; Samuel L. Mitchill, M.D., Vice-

President; Archibald Bruce, M.D., Registrar; Abraham Brower, Treasurer.

The Professors, as appointed by the Regents, were—Edward Miller, M.D., Professor of Practice of Physic; Samuel L. Mitchill, M.D., Chemistry; David Hosack, M.D., Botany and Materia Medica; Benjamin Dewitt, M.D., Institutes of Medicine.

But as the system of instruction thus arranged would have been incomplete, the trustees established lectureships to supply the deficiency, and appointed Nicholas Romayne, M.D., and John Augustine Smith, M.D., Lecturers on Anatomy; Benjamin Dewitt, M.D.,* Lecturer on Chemistry; David Hosack, M.D., on Surgery and Midwifery; Edward Miller, M.D., on Clinical Medicine.

The faculty, thus constituted, was a strong one; but the college was entirely destitute of funds, and its means and appliances for illustrating the lectures exceedingly meagre. Its sessions were held in a small two-story building, in Robinson street, near Columbia College, a position then in a central part of the city. Its lecture-rooms were very small, containing only a few benches and a table, at which sat the professor; and the attic supplied the only place left for a dissecting room. The anatomical museum had merely germs of what was required, and the chemical laboratory was equally small. But what was wanting in means was made up in the energy and industry of the gentlemen engaged in the enterprise. They succeeded in collecting, at the first session, fifty-three students, a number small indeed in itself, but large for a first attempt at that period, and with a rival in Columbia College. That they satisfied public expectation, they learned by a very substantial proof; for at the next session of the Legislature, the state made a grant to the college of the sum of twenty thousand dollars.

At the second session, the lectures were attended by seventy-two students, a larger number than were ever before collected as a medical class in our city; and at the third session, about the same number were present. But then the college received a check. It appeared that its faculty was composed of discordant elements, and dissensions soon grew up among its members, which proved irreconcilable. No good would now arise from inquiring into the cause of these quarrels; but their effect was decided and

* In the absence of Dr. Mitchill, then Senator in Congress.

most unfortunate. Some of the professors withdrew from the college; lectures were delivered on only particular branches by the rest; and the pupils were again reduced to only one-third their former number. The Regents of the University, upon being informed of this unfortunate condition of the college, determined to reorganize it; and then granted an entirely new charter, under which the institution has since been governed. It was now taken entirely out of the hands of the Medical Society, and its interests and management confided to twenty-five trustees, appointed by the Regents themselves, and removable at their pleasure. But, although the college was thus rendered more free to pursue its object without interference, it had not within itself sufficient strength to be sustained. The medical faculty of Columbia College still existed. Dr. Romayne, the most ardent and active among the originators of the college, forsook it and became foremost among its enemies. Associating with himself several talented and aspiring young men, he formed another school under the name of the "Medical Institution," under the auspices of Queen's College, in New Jersey. It thus fell out that New York, with then less than 100,000 inhabitants, had three medical schools, dividing between them the amount of medical talent fitted for teachers, adequate only to the formation of one good institution. In consequence, neither college succeeded, and the cause of medical education languished. And, as a proof of how feeble were the schools which thus undertook to teach medicine, I may state, on the authority of one of the surviving members of one of these schools, that at one time, there were three professors of anatomy in New York, professing for a whole session to teach anatomy, and without a single subject for dissection in either college. And the bad state of feeling which at the same time existed between these rival schools, tended still farther to injure them in public estimation. There was not, in this state of things, the wholesome competition, the generous rivalry, which benefits all parties engaged, as well as the general community. It was a mere struggle which, by destroying the rest, should absorb within itself all the patronage of the profession. And one of these objects was surely accomplished. They destroyed one another, but not to the advantage of New York, but that of its sister city and great rival, Philadelphia.

At the period to which our history has reached, then, there

were three medical schools in our city, each struggling against the other, and neither capable of separate existence. It was under these circumstances that the Regents of the University once more interfered. And it is but just to them to remark that, although occasionally misled among the jarring elements they attempted to harmonize, they have ever shown an earnest and honest desire to promote the cause of medical education. A committee of this body reported as early as April, 1811, "That it had become desirable in every point of view to consolidate the faculty of the College of Physicians and Surgeons with that of Columbia College." "This object," the Committee state, "appears to be one of the first importance, inasmuch as it will assemble, in one institution, a splendid collection of medical and surgical talent; and it cannot fail to merit and receive the patronage of the Legislature. It is unnecessary for the Committee to attempt to display the important advantages to the state which a well-organized medical school in the city of New York must afford. Its hospital and the subjects furnished by the State Prison, without the violation of law, present a field for the acquisition of medical and surgical knowledge unrivaled in the United States; and it is only necessary to establish an institution under the fostering care of the Legislature, in which shall be united the best talent, to secure these advantages to the state."

It was not, however, until two more years had elapsed, that the desirable object was effected. In March, 1814, another committee of the Regents, to whom was referred the Annual Report of the college, reported, "That an arrangement had been made to effect a complete union between the two medical schools, by which all the professors of Columbia College agree to be transferred to the College of Physicians and Surgeons, and that the trustees of Columbia College have consequently abolished the faculty of medicine of that institution." The arrangement thus made was confirmed by the Regents on the 7th March, 1814; and thus, at last, was collected in one school most of the strength and talent of the profession then existing in the city. The consolidated faculty, now become Professors of the College of Physicians and Surgeons, were as follows:— Samuel Bard, M.D., President; Benjamin Dewitt, M.D., Vice-President, and Professor of Natural Philosophy; Wright Post, M.D., and John Augustine Smith, M.D., Joint Profes-

sors of Anatomy, Physiology, and Surgery; David Hosack, M.D., Professor of the Theory and Practice of Physic, and Clinical Medicine; William James McNeven, M.D., Professor of Chemistry; William Hamersley, M.D., Professor of the Clinical Practice of Medicine; Samuel Mitchill, M.D., Professor of Natural History; John C. Osborn, M.D., Professor of Midwifery and the Diseases of Women and Children; James S. Stringham, M.D., Professor of Medical Jurisprudence; Valentine Mott, M.D., Professor of the Principles and Practice of Surgery; John W. Francis, M.D., Professor of Materia Medica.

This period is the true era from which to date the stable and fixed existence of this college. It was patronized and endowed by the state, and was duly chartered and authorized by the Regents of the University. It contained within itself abundance of talent and energy; men of various ages, but all of high standing and reputation. Some of these still survive, and while they live, the time has not come to write their eulogies; but of the honored dead I cannot but make a passing notice.

Dr. Post and Dr. Hosack were the two great physicians of their day, to whom the profession in New York deferred as their undoubted superiors. They were rivals in fame and professional practice, and so continued until each retired from the city, to enjoy in the country during their last days, honorable leisure and rest. Eminent as each was in his own sphere, no two men could have been more thoroughly contrasted in their lives and characters.

Dr. Post was quiet, unostentatious, even retiring in his manners. Many accused him, but unfairly, of coldness and want of natural feeling, so little did he allow his ordinary quiet manner to be disturbed; but those who knew him well, and it is my pride and pleasure to have been honored with his friendship,—*we* knew that his heart was not cold towards those with whom he chose to unbend. The profession universally respected and esteemed him. His treatment of even the youngest and humblest practitioner was scrupulously delicate and honorable; he was punctual in every engagement, and thoroughly reliable in every thing he uttered. This character, and this course uniformly carried out, added to his high professional reputation, secured him the largest and best consultation practice of the city. And so decidedly was he deemed first among us, that his opinion, once fairly pronounced in any case, could hardly be

questioned; and bold was the man who would gainsay it. His numerous patients, and among them was included a very large proportion of the first of our citizens in wealth, in character, and in station, gave him a degree of confidence which was most flattering, and their attachment to him was unbounded.

He was, without rival, the first surgeon of his day in our city, and his skill as an operator was admirable; and here, his perfect coolness and presence of mind, as well as his thorough knowledge of anatomy were of vast advantage to him. I can even now see him, as he stood quiet, but collected and self-confident, when, in the New York Hospital, in the presence of almost the entire profession, he was about to tie the carotid artery for the first time in our country. The success of the operation was perfect, and with equal skill and equal success he was among the first to perform similar operations in other large and deep-seated vessels. But although he aimed most at a high surgical reputation, as a physician and general practitioner he was not less eminent; and it was in general practice that he was most largely engaged; for New York could not then, as now, furnish ample occupation in surgery alone. As a teacher, although I have listened to the prelections of some of the best lecturers in Europe and in our own country, I have not heard his superior. When he entered his lecture-room, the most profound silence would reign, and every eye would be fixed on him. He began in a tone so low as to be inaudible; but presently he was heard, in his peculiar quiet, clear, and terse language, conveying all he would say in a manner so easy that all could understand, but in words so few that none could be lost.

The position he held in our city has never since been attained by any other individual; for with the great growth of New York, medical men of vigorous talent and great ability have become so much more numerous that no one person can again attain a rank far beyond all the rest. And long did Dr. Post hold this enviable position. At the age of twenty-three years, in the year 1792, he was appointed Professor of Anatomy in Columbia College, and he continued to hold the office in that and the College of Physicians and Surgeons until 1826. He became President of the College in 1821, upon the death of Dr. Bard. During the greater part of this period, also, he was one of the surgeons of the New York Hospital, where, as in the profession at large, he was still the acknowledged head. He died in June, 1828.

The most distinguished colleague of Dr. Post was Dr. Hosack, a professor whose reputation was deservedly more extensive throughout our country than any other medical man whom New York has produced. Dr. Hosack united to great ability, extraordinary energy and determination. His industry was untiring, and his ambition to rank first, not only in his profession, but also in science and letters, kept him incessantly before the public. In every project for the advancement of either one or the other in this city, he was active and foremost; and whether it was for the interests of the profession or the promotion of any public object, his ready pen and powerful elocution were still at hand. This very ardor and enthusiasm of his character did not, however, always make him friends; for, in the pursuit of his object, he would, sometimes, necessarily encounter opponents. But, in spite of all opposition and every obstacle, he rarely failed to accomplish what he undertook.

As a lecturer, Dr. Hosack was admirable. Earnest, emphatic, forcible, he arrested and fixed attention from the beginning to the end of his discourses. None of his opinions were undecided or feebly proposed; and his firm convictions would most frequently carry away his audience, and make them, for the time at least, of his opinion. But, whether right or wrong, his class was sure to know and remember them.

As a practitioner, his rank was of the highest order. Clear in his perceptions and rapid in thought, he promptly investigated his cases, and as promptly devised the treatment. At this day, his practice would be considered too active and not always safe; but at that period it was deemed excellent, because it was decided and vigorous. He, as well as Dr. Post, was long engaged as a teacher of medicine, having begun his career as a professor of this college in 1807, and closed it in Rutgers' College in 1830. He retired from practice, while in the full possession of all his powers, bodily and mental, and spent the last years of his life in elegant retirement at his beautiful country-seat at Hyde Park, on the Hudson river. Here, his unbounded hospitality brought to his house many of the first men of our country, and he enjoyed to the full the leisure we all hope for as we advance in life, but which so few attain. He died in this city, of apoplexy, on the 24th December, 1825.

With two such men as Dr. Post and Dr. Hosack at the head of the college, aided by colleagues, most of whom have

since taken high rank in the profession, it could not but succeed; and from this period its prosperity was decided and progressive. "The seven subsequent years," wrote one of its faculty, "may be fairly considered the most flourishing period of our college;—every year added to its means of instruction; the number of its students rapidly increased with the opening of each session, and the high reputation of the New York University was recognized in every portion of the Union. The class-room was occupied by more than two hundred students; the language of the Regents, in their Annual Reports to the Legislature, breathed the most flattering expressions of approbation in behalf of the talents and zeal of the professors, and the substantial attainments of the scholars that had been committed to their care."

But prosperous as was the college during these seven years, it even then contained within itself the germs of mischief, which, developing themselves shortly afterwards, eventually brought about the most violent revolution it had yet suffered. Dissensions grew up between the Medical Society of this city and the college; and the Society made formal complaints to the Regents of the University against the professors. The two bodies soon became arrayed against each other in bitter hostility, and the whole profession of the city was divided into two parties, in favor of one or the other of these two. The Medical Society so far gained the victory, that the Regents were induced to appoint as trustees several of its members who had been most actively engaged against the professors.

The dissensions which already existed, were inflamed a hundred-fold when the parties engaged in them were thus brought face to face, in the trustees' room. A formal set of charges was preferred by the trustees against the professors, accusing them of mismanagement of the college affairs, in every variety of mode. Now, that these things have all passed away, and those not engaged in them can look back impartially and judge between the contending parties, it is obvious that although the finances of the college had been most unfortunately managed by the trustees, while the professors formed a large majority of that body, still, the mode in which they were attacked by the opposite party was not such as was calculated to remedy the abuses of which they complained. Although some of the charges against the professors were well founded and sufficiently grave, others

were unreasonable and captious; and both parties showing themselves in the wrong, the influence of both with the Regents was weakened, and the abuses which existed in the college, were modified, not cured.

These events occurred during the years 1819 and 1820, and the partial improvement in the college affairs which took place, gradually brought about a truce between the contending parties, so that in February, 1821, the Regents, in their Annual Report, congratulated the college that its dissensions had ceased, and harmony been restored. The peace, however, proved unstable. New elements of discord arose, and the trustees became gradually arrayed against the professors, almost to a man. Once more severe complaints are made by them to the Regents, and no less severe rejoinders by the professors; and, so acrimonious do these papers become, that in one instance the Regents returned one to the professors in token of their disapproval of its intemperate language. The divided house could not stand, and, eventually, the faculty, in despair of carrying on the college with such a powerful opposition within its very bosom, resigned their chairs, in a body. If, as some supposed, these resignations were made with the expectation of forcing the Regents to dismiss the opposing trustees rather than lose the entire body of the professors, the event proved that they had miscalculated their strength. Their resignations were accepted by the Regents, and it was immediately determined that the college should be reorganized, and a new faculty appointed. This crisis in the affairs of the college took place in the month of April, 1826, and an entirely new body of professors was elected by the Regents, in July following. Thus were driven from their posts a body, consisting mainly of the ablest medical men of our city; long trained to the business of teaching, with reputations as lecturers widely established; and, with the college under their management, however embarrassed in its finances, still reasonably successful, or with a good prospect of becoming a great medical school.

Although I was one of those appointed to succeed these gentlemen, and although my associates were gifted and talented men, it is due to fair and impartial truth, to say, that this revolution in the college was most unfortunate to its interests. It completes the history of a tissue of scenes of division and discord, which had so long been its bane, and which we trust will never be renewed. But the loss of its eminent faculty was not the only cause which now threatened

the prosperity of our school. Its finances were left in a most wretched condition. Beginning, originally, without any funds, it applied to the state, and received, in the year 1808, a grant of twenty thousand dollars. Subsequently, in the year 1814, after the union with Columbia College, a second grant of thirty thousand dollars was made; and during the whole period, it continued to receive an annuity of five hundred dollars. If these sums had been really donations of so much money to the college, they would have been ample to have erected its buildings, and furnished all the aids to instruction which were then required. But, unfortunately, the liberality of the state took a very different direction. The vicious system of raising money for public purposes by lotteries, was then in vogue; and the state, when asked for aid, granted it in sums to be raised by future lotteries, and to be paid out of their proceeds from time to time. It was in this mode the college received its grants. Although requiring the immediate outlay of a considerable sum for college buildings and apparatus, it received only a grant of moneys to be raised at a future time, and at intervals covering a number of years. Of course it was obliged to borrow the money for its present purposes.

But if the college lost a body of able professors, who were replaced by others who, at the time, had not yet attained the high reputation of their predecessors, at least one good grew out of the change—harmony was restored to the institution; the constitution of the Board of Trustees was altered; the professors were no longer trustees, and a majority of gentlemen, not members of our profession, was introduced into its body. This harmony, from that moment, has remained undisturbed; and trustees and faculty have worked together for the good of the college, with a single eye to its prosperity, for the last thirty years.

The history of our school, as thus far traced, has pointed out how much the defective constitution under which it was governed, led to disorders which were constantly interfering with its prosperity. Its trustees were first the entire medical profession of the city, as collected in the medical society of the county; a body of more than one hundred persons of every variety of rank and position, and many of them ignorant persons, entirely incompetent to have any voice in the management of a learned institution. This was immediately discovered; and within a single year, the charter was amended so as to vest the appointment of the President, and other

officers, in the Regents, instead of the trustees. The Board of Trustees was limited in its number to twenty-five, and of these, the President, Vice-President, Treasurer, and Registrar, together with the professors, were *ex officio* members. Indeed, this body, for several years, consisted only of these officers of the college and a few persons not of the profession, leaving its government, virtually, entirely in the hands of the professors. Whatever may have been the facts as to the mode in which this government was administered, it necessarily caused a jealousy in the profession at large, that the whole power of teaching, examining, and conferring diplomas upon students, was exercised by this small representation of their number; and, from this well-founded jealousy, with no doubt some imprudence on the part of the faculty themselves, rapidly grew up the bitter dissensions which terminated, as has been already stated, in a complete revolution in the college.

The Regents had thus learned wisdom from the disasters in the institution, and in finally reorganizing its constitution, gave it the charter under which it has ever since been administered, and which works so happily. The Board of Trustees now consists of twenty-five persons, of whom not more than twelve can ever be physicians, and the rest are taken from other callings in life. The profession at large are in this manner sufficiently represented, and satisfied that nothing can be done in the college without their knowledge, or contrary to their interest; while an infusion into the Board of men of learning and high standing, out of our profession, gives a security to the professor that no measures founded in mere professional jealousy, shall be passed by the Board of Trustees.

As long, then, as sufficient care is exercised in selecting proper persons as trustees, and especially not to introduce into its body any medical men who are likely to become aspirants to the office of professor, the present constitution will work well, and is as perfect as it can be made.

The professors, as being most interested in, and best acquainted with the affairs of the college, are, in general, most competent to manage them; and, therefore, should have the power to recommend everything which is required in the institution; and this power they do possess, and have constantly exercised. For years past, every measure proposed by the professors, has been adopted by the trustees, and granted by the Regents where their consent was required. Every new appointment of lecturer or professor has been made in

the same manner; and, as long as the Board of Trustees is constituted as it now is, and the professors as prudent as the present holders of these offices, harmony and good order will prevail in our school; and there will always exist a power to check abuse wherever it may originate, and prevent the growth of evil before it reaches maturity.

The mode of appointing professors, which has prevailed for some years past, is particularly happy. When a vacancy occurs, the professors make diligent search for a successor to the office, and present to the trustees one or more names of persons whom they deem fitted for the station. This body appoints, from among the persons nominated, a lecturer, for a single year, who thus enters upon his office as a probationer for that term. If he succeed in satisfying his colleagues and the Board of Trustees, the latter body recommend him to the Regents; and, thus far, they have appointed every person so recommended.

Although this plan of appointment is not one originally arranged, but has gradually grown up as the result of experience and circumstances, it is evidently one of the best that could have been devised; and it has resulted in the formation of the able and distinguished faculty which now exist in the college. And so of the entire constitution of the school. It has gradually been changed, and adapted to the wants of the institution, until it has acquired its present shape; and we trust, under its guidance, the learning, ability, and zeal of its faculty will rapidly advance, until they have placed the school in a position second to none in America.

Upon the remodeling of the college, which took place in July, 1826, the Regents appointed John Watts, M.D., President; Thomas Cock, M.D., Vice-President; Nicoll H. Dering, M.D., Registrar; John D. Jaques, M.D., Treasurer. Professors.—J. Augustine Smith, M.D., Anatomy and Physiology; Alexander H. Stevens, M.D., Surgery; James F. Dana, Chemistry; Joseph Mather Smith, Theory and Practice of Physic, and Clinical Medicine; Edward Delafield, M.D., Obstetrics and the Diseases of Women and Children; John B. Beck, M.D., Materia Medica, and Medical Jurisprudence.

The new faculty entered upon the duties of their stations in November following; and, truly, they had a difficult task before them. The institution was left to their charge, loaded with debt; with buildings in a state of actual dilapidation, and in every way unfit for its purposes; and it was utterly des-

titute of museums or collections of any kind. Nor were the professors allowed, quietly, to perform their new functions. The gentlemen to whom they succeeded, with a degree of zeal and determination which should have ensured success, immediately established, under the authority of Rutgers' College, in New Jersey, a new medical school by the same name. A large and excellent building was erected in Duane street, and finished in time for the next college session; and thus, a powerful opposition to this college started with it upon the very first appearance of its new professors before the public. With their reputations already deservedly established as teachers of medicine, with their previous connections with all parts of the country through the pupils they had been educating for a number of years, and their experience in the machinery of collecting students, the professors of Rutgers' College necessarily drew around them a considerable proportion of pupils. And it was sufficiently creditable to their successors in this college, that they held their positions well and successfully, and drew together excellent classes, which increased every year. It would have been well if the opposition thus established by Rutgers' College, could have been continued and become permanent. The two schools would have mutually benefited each other by competition, as there was room for both. But the rivalry which existed between them was one of bitter and confirmed hostility, and neither could be satisfied with any thing less than the destruction of the other. Accordingly, the efforts of the State School and its friends, eventually succeeded in obtaining the passage of a law by our Legislature, which rendered the diplomas issued by Rutgers' College so manifestly illegal, that it could no longer hope for success, and its professors giving up the contest, the institution ceased to exist.

It was, however, neither possible nor to be desired, that New York should possess only a single school of medicine. All experience shows that every body of men, engaged in any enterprise, require the stimulus of competition to urge them to the amount of effort they are capable of exerting; and schools of medicine are no exception to this rule. In London and in Paris, where exist the best medical schools in the world, there are many associations of men engaged at the same time in teaching medicine; and a sufficient number of them succeed in collecting classes, to keep up a constant supply of the best teachers. There is room enough in

New York for a similar competition. Our city must not be looked upon, in judging of its field of action for any great enterprise, as confined to the island on which it stands, or even as including alone its great neighbor across the East River. By the long arms it outstretches in every direction by its railroads, and steamboats, and canal routes, with all the interior of our country, and its easy communication by sea with the whole Atlantic border, it brings within its reach students from our whole land; and as a field of medical and surgical practice, it has no less limits. How many a practitioner, before he leaves his house in the morning, sees and prescribes for patients from every part of the country lying within one or two hundred miles of the city, laboring under diseases which have baffled the physicians in the country. How numerous the individuals, who have met with severe accidents on our railroads, steamboats, and public and private works of every description, and who are immediately sent to New York for treatment. At this moment, there exists not in the world, from all these causes, a better school of surgery than the New York Hospital. Nor can any place be found where, in private practice, medical men can see a greater number of patients throughout the year than our city. And the number of individuals thus largely employed, and gaining all the skill and knowledge which such large experience alone can give, is great, and much larger than is supposed by those not conversant with the subject; and from this source will always be supplied a sufficient number of teachers for several schools of medicine. And I sincerely hope that the two now competing with this college, will endure and succeed; and as long as they teach well, and conduct their schools fairly and honorably, we will bid them God speed.

And here it will not be out of place to point out some of the means of clinical instruction possessed by New York, vastly greater than exist any where else on this continent. And it is especially valuable to the students who come to our city for instruction, that there are so many situations within their reach, in which they can have patients put actually under their care and management for a season. The mere seeing of patients under the treatment of others, and hearing observations on their cases, is indeed important to pupils, but this advantage in no way compares with that enjoyed by those who reside in the various hospitals and infirmaries of our city, and its neighborhood. And perhaps

most of those even familiar with our institutions, will be surprised to learn the number of these situations. There are at this moment sixty-six young physicians, or advanced students, residing in these institutions, or having charge, more or less, of the patients treated in them, within this city, Brooklyn, and the various islands adjacent to and dependent upon New York. There are one hundred and thirty-three medical gentlemen of more advanced standing, who are the attending physicians and surgeons of these institutions, and fifty-three consulting physicians and surgeons; making altogether two hundred and fifty medical appointments, to which those who are educated in our city, or eventually reside here, may aspire. Every one of these offices places under the charge of its incumbent, large numbers of patients suffering under every variety of disease or accident to which human nature is liable.

I have before me the details which show the medical staff of all these establishments, but I will not occupy your time with reading them. I have stated enough to prove the position I have advanced, that New York possesses greater means for learning medicine by the actual observation of disease, than any other place in our country: and if those who assemble here for instruction will but avail themselves of the ample means thus placed within their reach, they cannot fail, with sufficient industry and talent, to become learned and skillful physicians. A resident in any one of the institutions I have enumerated, may see, investigate, and prescribe for more cases of disease in a single year, than could possibly pass under his observation in ten years of private practice. And thus every year go into our profession many young men already more experienced, and, therefore, more skillful, than thousands of their professional brethren of twice their age.

The remaining history of the college is one of quiet labor and successful effort. For nearly thirty years its harmony has not been seriously disturbed, and it has been honorably and perseveringly engaged in instructing in medicine hundreds of men who are spread throughout our whole country, and in many instances, have done honor to their alma mater. Vacancies in the professorships have occurred from time to time, but they have been filled with care and judgment, by those who made the appointments. We have lost by death several of our ablest professors, since the last great change in the college which I have chronicled. The names of Dana,

of Beck, and of Bartlett, are familiar to most of you, and the very mention of these names is sufficient to indicate the severe loss sustained by our college, at the demise of each one of them. I must leave to others the pleasing task of characterizing them as they deserve—of writing their eulogies; knowing full well that each has left behind a reputation which I could not enhance.

A period of peace and tranquillity affords little materials for history, but it may be, nevertheless, one of continued prosperity. No longer distracted by the broils and dissensions of former years, the college has improved the opportunity by steadily advancing in increasing its means of usefulness. Instead of the contracted and badly arranged building it occupied in Barclay street thirty years ago, it is now established in one which is inferior to none in our country. It possesses a large and well-adapted museum of anatomy, surgery, and pathology, an excellent obstetrical collection, and an abundant series of specimens of the materia medica. It has a valuable and well-selected library, to which its pupils have easy access. And in short, all the means for illustrating and enforcing the teachings of its learned and able faculty, it possesses in abundance, and of the best character. And above all, it enjoys a character which none will gainsay, that a diploma granted under its authority is a real evidence that its holder has not only had opportunities second to none in our country for learning medicine, but has actually acquired an amount of knowledge fitting him to begin its practice.

ART. III.—*On the Localization of Baths, and on the Application of Cold and Heat upon the Different Parts of the Human Body.* By CHARLES MAYOR, M.D., Member of several Scientific Societies.

THE memoirs contained in this paper were originally published in the French language, in the year 1844, at Lausanne, (Switzerland,) having previously been presented to the Academy of Sciences, at Paris, and there favorably noticed. Since then, several medical authors on pathology have mentioned them; among them, Dr. Amusat, in his treatise *On the Employment of Water in Surgery.* This very interesting work has been translated from the French, and published at Buffalo, N. Y., by Prof. Hamilton. The Medical Society of Southern Central New York having expressed a desire to see my work wholly translated,* in answer to their wishes, I

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* *Transactions of the Medical Association of Southern Central New York,* for 1854.

present to the medical profession a translation of my work, *On the Localization of Baths*, etc., with such additions as I deemed most useful.

My father, Prof. Mathias Mayor, whose labors for mankind and for science were so useful, has, in several of his writings, highly recommended the use of water in surgery, and has described his method of employing it. Believing that I shall pay a just tribute to his memory, and obtain the approbation of my fellow physicians, I quote a few words from his *Surgery Simplified*:—"Water has been invoked and proclaimed in every age and by the greatest surgeons, as the most important agent in the treatment of most surgical affections, and as the means, *par excellence*, to favor the efforts of nature. It is to be regretted that this opinion, so prevalent among surgeons and physicians, has had so little influence with the people, and especially with military men."

1. *On the Localization of Baths.*—The pathological cases which claim the use of local baths are numerous; but the imperfection of the means employed for their administration has, till now, greatly prevented their use. In fact, the medical art possesses no apparatus suitable to bathe separately the leg, the knee, the thigh, the elbow, the arm, and the forearm. The immersion of the extremities becomes even impossible, when the state of the invalid, or of the affected limb, prevents the displacement of the latter; as, for example, when the articulations of the foot and of the knee are affected at the same time, or when the latter is stiff and immovable. To surmount these obstacles, to bathe separately the various parts of a limb, with the least possible cost and trouble, in the simplest and most convenient manner, while the room of the invalid, and all things surrounding him, are kept free from moisture, and he himself allowed to choose the most comfortable position, such is the problem which I once tried to solve while seeking to bathe the hand and wrist of a person whose arm it was necessary to keep free from moisture, and which could neither be extended nor placed in an ordinary vessel.

A circumstance, which I can but mention with great pleasure, helped me to solve this difficulty. My distinguished friend, Dr. Junot, of Paris, used, in my presence, the *hemospasic* apparatus (of which he is the inventor), the object of which is to draw, in a very short time, a large quantity of blood to the inferior part of the body. I at once concluded that the instrument which he employed, com-

plicated and costly, though very ingeniously contrived, could be supplied by apparatus more simple, at less cost, and which could be constructed in places destitute of the facilities found only in large cities. The labors undertaken for that purpose were successful, and led me to the discovery of means efficient for the localization of baths.

PLATE 1.

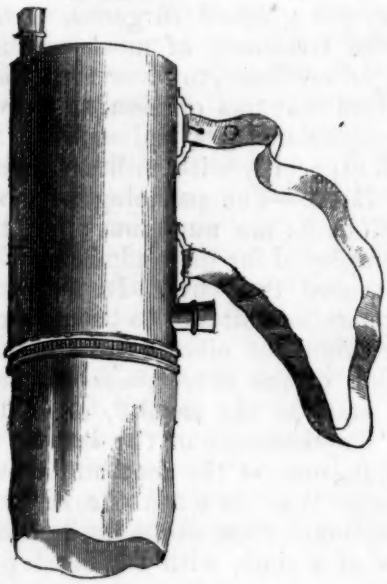


PLATE 2.

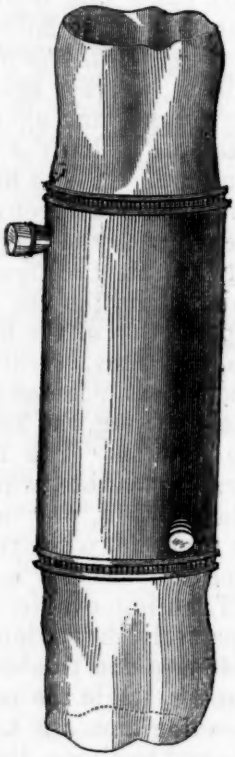
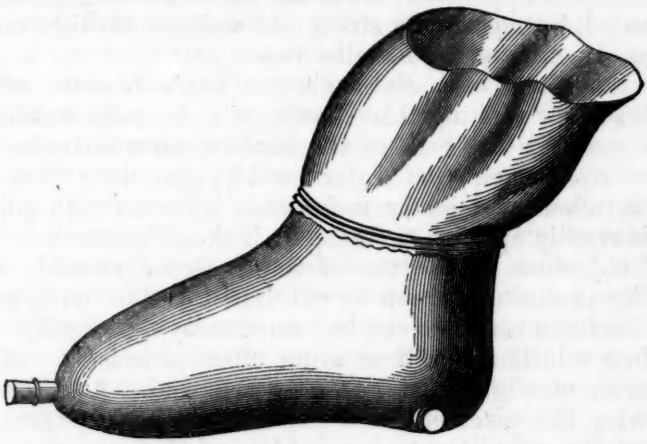


PLATE 3.

My apparatus consists of metallic vessels adapted to the form and size of the part which they are destined to receive. They terminate in *cul de sacs*, if destined to bathe the extremi-

ties of the limbs, and are open at both ends, if intended to inclose other parts of the limbs, or both hands at once. (Plates 1 and 2.)

PLATE 4.



An apparatus designed for the foot should have the form of a large shoe or boot. (Plate 4.) It should be cylindroid, resembling the tin-cases used for collecting botanical specimens, if intended for the hand ; for other parts of the limbs it should be cylindrical. If the apparatus is intended for an articulation at its flexion, it should consist of two metallic rings placed at the extremities of a sheath made of some impermeable cloth, constituting a cylinder flexible in its middle part, and consequently capable of describing an angle corresponding to that made by the diseased joint. (Plate 3.) When an apparatus designed to bathe a whole limb is thus articulated, the latter can readily execute movements of flexion and extension.

Each vessel has two small openings, the superior one for the introduction of the water of the bath, the inferior one on the side, to empty it. These orifices should have a metallic rim surrounding them about one inch in hight, so as to be closed by corks. Each large opening of such an apparatus is provided with an impermeable sheath, very flexible, and five or six inches in length, which, tied around the limb of the sick person, will prevent the leaking of the water. This piece, to which I shall give the name of sleeve (*manchette*), must have a circumference at least equal to that of the opening on which it is to be attached. The vessels designed for the extremities have but one sleeve, the others have two.

I know but two materials suitable to make them of, *india rubber* and *bladder*. To make a sleeve of india rubber, take a

thin, elastic, and very flexible sheet of that substance, and cement its edges together with india-rubber glue. A sheath is thus obtained, one of whose extremities will form the mouth of the apparatus; while the other is strongly tied and cemented, by means of a string and resinous varnish, around a large opening of the metallic vessel.

In the place of india rubber, a hog's bladder can be employed for making this sheath, as it is easily formed by cutting off the two ends of the bladder, after softening it in *cold* or *tepid* water (hot water would injure it). This substance, when sufficiently moistened, becomes very pliable, and is readily applied to the part it should surround. The chief objection to the use of this material consists in its liability to decomposition by continued contact with water; but this inconvenience can be removed by dipping the bladder in a solution of salt or alum after each bath. It can, however, at slight cost be easily renewed. A bladder for renewing this piece of the apparatus, can be kept free from insects, if wet with salt water, blown full of air, and, when dry, folded and stored where mice cannot have access to it. A clear and thin bladder is best for this purpose. A piece of intestine will serve for making apparatus for legs of children, and fingers, etc. Probably other impermeable fabrics could be found which, by their thinness and elasticity, would take the place of india rubber, or of bladder. A resinous varnish can be employed to obtain a water-tight seam, and to cement the flexible cylinder to the metallic ring I have spoken of. The varnish, known by the name of *liquid glue*, will answer for that use.

It is only necessary to look at one of these new bathing contrivances, or read their description, to readily understand their use. For example, if you desire to bathe the hand, it is introduced through the sleeve into the metallic vessel; the sleeve is then secured around the forearm with a band, or by means of a handkerchief folded like a cravat. If intended for the knee, one of the sleeves is placed on the thigh and the other on the leg. The apparatus being adjusted, all that remains to be done, is to close the inferior orifice, and fill the vessel through the other opening with such substance, aqueous, oily, or spirituous, as may have been chosen. The upper opening must then be closed, that nothing may escape from the apparatus. It is evident, that if a vessel with larger proportions were constructed, the two limbs, or even a part of the trunk, might be bathed; and if the apparatus had the

form of a pair of pantaloons, it could be used to bathe separately the seat. The vessels which I have made are of sheet tin, varnished within and without, but other metals, glass, vulcanized india rubber, gutta percha, etc., could be used. Whatever form is given to them, it is important, that the parts of the body they are intended to receive should not be incommoded, and that they should be completely immersed.

I will recapitulate the principal advantages afforded by the apparatus I have now described. 1. These different kinds of apparatus are easily obtained in any place, and at small cost. 2. They enable us to localize a bath upon all portions of the extremities, and without obliging the patient to remove his limb from the bed, or to take a sitting position, which is often fatiguing, and sometimes injurious or impossible. We ought always to be able to select and keep that position which is most convenient. 3. The liquid not undergoing any evaporation, will retain its warmth a long time, especially if we take the precaution to surround the vessel with a bad conductor of caloric. The slight subtraction of caloric, resulting from the coolness of the walls of the vessel, will be compensated for by the heat which the diseased limb supplies to the small quantity of water surrounding it. 4. If we wish to bathe the hand, the forearm, or the arm, the apparatus, if furnished with rings and cords, might, under certain circumstances, be suspended from the neck of the patient, and he could thus be permitted to attend to his business, while he is at the same time continuing his bath (see plate 1). 5. The liquid can be renewed without changing the position of the limb, or cooling the part which is subjected to the bath. 6. Since it is necessary to use but little liquid, the cost of combustible is almost nothing, and the trouble of preparing it is trivial; and, if medicated baths are employed, they will also be attended with but little expense, even when such expensive articles are employed, as the iodurets, the sublimates, etc. 7. The vessel being hermetically closed, prevents the escape of any of the volatile principle which the water may contain. 8. The apparatus having two openings, can be used where we wish to submit a limb, or a portion of it, to a continued current of water. For this purpose we have only to adapt to the upper orifice an elastic tube, communicating with a vessel placed at a hight proportionate to the degree of impulse we wish to give to the water. The inferior orifice remains open, or it may be made smaller by inserting

into it a perforated cork, or a faucet. This mode of treatment, intermediate between the bath and the douche, would be useful in some cases.

Such apparatus could frequently be used advantageously in the veterinary art. Dr. Lebert, who was at the head of the medical faculty of the Lavey baths, and who now occupies, as author and practitioner, a very distinguished position in the medical faculty of Paris, had the kindness to address me a pamphlet, which I regret not being able to insert verbatim. It contains the history of the several pathological cases in which he used my apparatus. An extract from this pamphlet is given in a work which my learned fellow member published in 1842.* From this publication I feel constrained to make the following extract:—

"I have used these baths in a great number of cases, and found them most useful in diseases of the joints. Experience and a consideration of the general indications and nature of the diseases of which I am about to speak, have led me to deduce the following therapeutic indications for their employment:—

"1. *If the teguments are intact.*—Acute or sub-acute inflammatory affections, as for example in the case of felons, inflammation of the ligaments or fibrous structures, either of the feet, hands, or knees, etc., and in general wherever there is severe pain and tension, we ought to employ them to soothe, or even to encourage the bleeding of leeches. Local baths in inflammatory affections, have a soothing and emollient effect when prepared with an infusion of mallows, a decoction of flaxseed, or with an infusion of narcotic plants, such as hyosciamus, belladonna, and hemlock. To these baths laudanum can be added, or liquid acetate of lead, etc., etc., and other remedies according to the individual indications. These baths generally preserve an uniform temperature for a considerable length of time, and possess also, the great advantage of keeping the diseased parts from exposure to the air. But we ought not to continue them more than an hour consecutively, as a longer confinement would incommode the patient.† We have had

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* *Report on the use of the lavey water during the season of* 1841: by DR. HERMANN LEBERT.

† The inconvenience of which Dr. Lebert speaks can be mostly obviated by giving a sufficient length to the sleeve of the apparatus employed; for then only a slight constriction is necessary, since it acts on a larger surface. It would be almost nothing if the place where the sleeve is attached were higher than the

occasion to observe the soothing effect of local baths, with the water of lavey alone, in many cases of acute inflammation, and of abscesses occurring during the treatment of articular diseases, white swelling, and caries.

"A second class of diseases in which these baths would be useful, the teguments being in an intact state, are chronic affections of the skin. A person affected with common itch and psoriasis of the hands, has furnished us a striking example. Of all parts affected by these eruptions, the hands were the worst, yet they were the first healed, by the application of local baths. Diseases of the skin, either confined to one, or extending to several parts of the body, can be successfully treated with local baths; but these are also useful when the eruption, though more general, has its seat in some particular part, as in the hands. Every one knows, that other things being equal, we are more anxious to remove an eruption covering only a small surface, from a part exposed to view, than from a larger one concealed by the clothes. Care should be taken in such cases to prevent driving the eruption inward, and general treatment should always be simultaneously employed. In such diseases, the waters of Lavey can be used pure, or mixed with a solution of lac sulphur, of carbonate of potash, the sulphurous alkaline solution of Biett, a solution of acetate of lead, of sulphate of zinc or of copper, of corrosive sublimate, etc., according to the special indication in each case.

"2. *Diseases in which the teguments are not intact.*—These are chiefly diseases of the joints accompanied by abscesses, fistulas, ulcers in the soft parts, or in the bones. Local baths with pure Lavey water have been especially useful in affections of the bones. I have thought that the absorption of

part which must be bathed, as is the case when we bathe at the same time the forearm and hand, the sleeve being secured around the superior part of the arm. Besides, this constriction will not be felt at all, when the bath and compression of the diseased limb occur at the same time, two means which can, more than is generally believed, be combined in the most advantageous manner, even against irritations which are inflammatory.

A band made of an elastic material, such as netting or india rubber, sufficiently long to be wound around the whole part which the sleeve covers, will be most suitable to produce a pressure equally distributed, moderate and yet sufficient. This band should be terminated by two pieces of tape.

Impermeable dressings made with cloths, either wet with pure water or with water mixed with other substances, and covered by impermeable cloth, like oiled silk, have some analogy with local baths, but they have less efficacy. My father much approved of that mode of dressing and I have had many occasions to employ it usefully, particularly in 1847, when a number of wounded soldiers were brought to the hospital of Lausanne. It will also be a light, convenient, and cheap substitute for *poultices*, if the clothes are wet with a decoction of flaxseed.

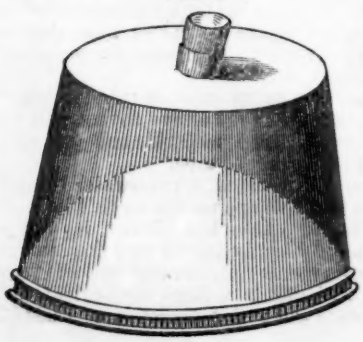
the water in these cases, was greater in local baths almost hermetically closed than in those taken in the ordinary method. In eight cases of diseases of the bones I have seen suppuration promptly diminished, and the condition of the soft parts improved by this treatment. In several cases of white swelling and caries of the foot, the patients could not endure the position requisite for the ordinary foot bath, when they have taken the local baths, with the apparatus of Dr. C. Mayor, without changing their position and while lying in bed."

2. *Application of Cold and Heat upon the Different Parts of the Human Body.*—Cold and heat, as all know, are valuable agents for the treatment of a great number of diseases; and, if their administration is not generally attended with difficulties, the means usually employed for this purpose require some improvement. Those used for refreshing the head, particularly, present inconveniences which it is most important to obviate, as the local use of cold is of great importance in the treatment of the acute and chronic affections of the brain.

Affusions upon the head with cold water can hardly be given except when the invalid is in a bath—a circumstance which very much prevents their use as well as the duration of them.

Continued irrigations, so useful in the injuries of the extremities, could only be applied with great difficulty for the refrigeration of the head. Saturated cloths bring in contact with the teguments of the skull but a small quantity of water, which soon becomes warm, and hence it is necessary frequently to renew them. A bladder filled with cold water has not this inconvenience, but it is difficult to adjust, and it is easily displaced by the least movement of the head. Filled with ice, it has the same disadvantage so soon as a part of it is melted.

PLATE 5.



Having been consulted by a person with a chronic affection, and for which the continued application of cold on the head was necessary, without the necessity, however, of stopping his occupations, I invented the apparatus which I am about to describe, and which I think will prove a convenient substitute for those whose disadvantages

I have enumerated. This apparatus (Plate 5) which I call a *Refrigerant Casque* consists of a tin vessel, varnished within and without, and having the shape of a hat, which, instead of the rim, should have a small border of about the twelfth part of an inch. The interior part of this recipient consists of a cap of some impermeable cloth, strongly cemented and fastened by its edges to those of the vessel. This cap will adjust itself to the head when the apparatus is worn by the patient. It can be made by uniting with a varnished seam (see the preceding memoir) two leaves of vulcanized india rubber cut in the shape and size necessary to fit the head. This metallic helmet has upon its top a vertical orifice about one inch in diameter, from which a rim rises three quarters of an inch in hight. This orifice to which is adapted a cork, is used for the introduction of the water or ice which it is designed to contain. The whole hight of this helmet is about six or seven inches. An apparatus thus constructed, having a sufficient diameter, can be used for heads of all dimensions; but if one finds it necessary to use such an apparatus for any length of time, it will be more convenient to have one constructed which will exactly fit his head. To obtain a correct measurement for this purpose, the horizontal circumference of the head is taken with a tape passing over the lower part of the forehead. The length thus obtained, with half an inch added, will give the interior size of the helmet. I need scarcely add that, if desired, the form of this helmet could be varied, and its presence concealed either by covering it with a hat or bonnet, or by giving it the complete appearance of any other head-dress. Sheet copper, boiled leather, vulcanized india rubber, gutta percha, or any other substance, at the same time solid, flexible, and impermeable, can be substituted for tin.

This apparatus, with which I have obtained good results, recommends itself by its simplicity and cheapness. As it can contain about half a gallon of water, it will not be necessary to renew its contents frequently. The weight of the water is felt only when the patient is seated or standing. To prevent its becoming uncomfortable, but a part of the vessel might be filled; when the head is upon a pillow, it will support the apparatus. Under some circumstances it could be conveniently suspended. The construction of this apparatus prevents the escape of moisture upon the bed or clothes of the one using it, and he is enabled, under some circumstances, to attend to his customary business. This

casque exactly surrounds the head and covers a large surface, advantages not possessed by bladders and other means generally employed for the same purpose. I have even observed the contents of the casque to be renewed without awaking the invalid, it having first been emptied by means of a syphon or faucet.

PLATE 6.

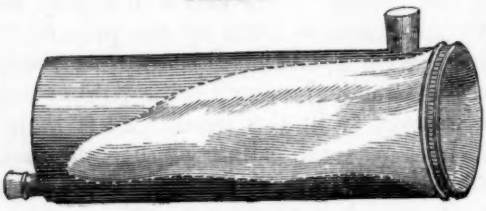


PLATE 7.

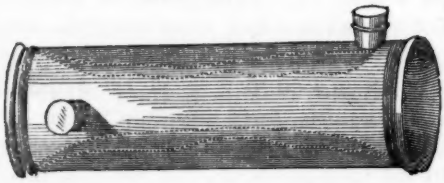
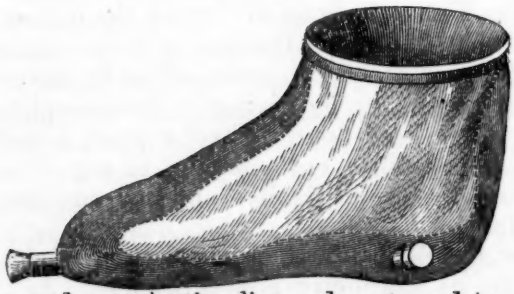


PLATE 8.



Apparatus, wide but not deep, could be applied upon the teguments of the trunk, filled as might be required, with cold or warm water. These must first be covered with a wet cloth, if the simultaneous action of heat and moisture is required. Apparatus, whether designed for the application of cold or heat on the limbs, as I have already observed, is based on the same principle. In either case each vessel must consist of two parts, one exterior and metallic, while the other made of impermeable cloth, is intended to surround exactly the diseased part, and to separate it from the water which furnishes or removes caloric, as it may be warm or cold. The liquid is introduced between the two parts, and can be renewed as often as needed. This apparatus is analogous in most respects to those used for local baths, which I have described in the preceding part of this paper; for they differ from them, only in the disposition of their flexible parts. Vessels destined for the extremities, instead of a sleeve, have an impermeable sac, of a form and capacity proportionate to the part upon which they are to

be applied. The mouth, as with the cap of the casque, must be glued and tied upon the borders of the large opening of the metallic vessel.

In cylinders, simple or articulated, destined for the limbs, an interior sheath should be substituted for the two sleeves. This sheath, fixed at its extremities to those of the vessel, should have such dimensions, that its sides approach and almost touch each other from the effect of the pressure of the water. A diseased member, introduced into this tube, with double sides, will thus be surrounded with water on every part, without, however, being in contact with the liquid. Whatever may be the apparatus used, the water must only be introduced when the part to which it is applied has been placed in the vessel. (Plates 6 and 7.)

These bags or sheaths are made and attached to their appropriate vessels, as is the cap of the refrigerating helmet. The flexible parts of these apparatus can be made from a bladder, by cutting off both extremities if a sheath is needed, or only one if you wish to form a sac. But, on account of the width of the casque, it would be difficult to make its cap from the half of a bladder; and vulcanized india rubber will be generally much preferable to bladder for making the kind of apparatus we now speak of.

The apparatus I have now described possesses the following advantages:—1. It can be exactly applied upon all points of the part which is submitted to the action of heat or cold. 2. It permits the invalid to take the position most convenient for him, and even to change it at his pleasure. 3. The liquid can be removed without disturbing the invalid or breaking his slumber.

My father and I have both experimented upon the usefulness of this kind of apparatus, when cold applications were necessary after a surgical operation.

Where, on the contrary, it is expedient to warm quickly the lower extremities of persons who are obliged to keep their beds; I have obtained good effects by using vessels, into which the feet can be placed, and having consequently the form of a large shoe or boot. (Plate 8.) All the varied forms of such apparatus can be modified at the will of the physician, and applied to the different cases which demand their employment.

BERKSHIRE, N. Y., February 1, 1857.

ART. IV.—*Case of Cysticercus Cellulosæ, with Remarks.* By E. SCHILLING, M.D. A paper read before the Society of German Physicians of the City of New York, November 6, 1856. Translated by M. BLUMENTHAL, M.D., Physician to the Jews' Hospital, New York.

A German woman, æt. 31 years, was received at Ward's Island Hospital, in 1853. She was subject to epilepsy, and appeared very stupid. She was, however, not deranged; but understood everything that was said to her, and her answers were not disconnected, though very imperfect and unreliable. Her manners were those of a hysterical woman, and her appearance was that of a person who had become much reduced by external circumstances. She had neither friends nor acquaintances, and it was totally impossible to get any reliable data as to her previous history.

The epileptic attacks were very irregular in their occurrence, and never lasted more than three or four minutes, and were always preceded by a marked aggravation of a severe headache, to which she was more or less subject all the time. On the frontal bone a prominent cicatrix was seen, under which, however, no depression of bone was discernible, but from which point the severe headache appeared to radiate; and which, in fact, was looked upon as the primary cause of her disease. As she was harmless and willing to assist in light work, she was retained on the Island eighteen months. In September she complained of more headache than usual; had frequent epileptic convulsions, and in one of them suddenly expired. I attended this case with Dr. F. Simrock.

We had expected, upon making the post-mortem examination, to find some lesion of the brain or upon the inner surface of the bone corresponding to the external cicatrix, but we were disappointed; the entire bony arch, as well as the outer surface of the dura mater appeared normal; but its inner side, as well as the surface of the brain, was literally covered, at several parts, with small tumors to the amount of several hundreds, of about the size of a pea; many of them were adherent to the under surface of the dura mater, being suspended as by a pedicle, and could be lifted from off the brain with the dura mater, leaving corresponding depressions in which they had rested upon the convolutions of the brain; others of these small tumors were lying free either upon or between the cerebral convolutions; and even in the substance of the brain, throughout, there

were these same bodies abundantly disseminated, so that there was no portion of the cerebrum in which some were not imbedded, being most plentiful about the choroid plexus. These bodies appeared different in different locations; those imbedded in the cerebral substance represented regular, smooth, transparent, round serous vesicles, of the size of a pea, while around the choroid plexus they were even as large as a bean, within which a lenticular whitish nucleus was discernible. Those upon the cerebral convolutions and adherent to the dura mater were smaller, more resistent, less translucent, and less regular in form. In the muscles of the otherwise normal heart we found five of these bodies with very thickened walls. The same were likewise found in the gluteal and deltoid muscles of the right side; those found here being inclosed in a vascular membrane, or covering of two or three lines in thickness. The liver was normal; and in the intestines no traces of tænia were to be found. The specimens presented consisted of a small part of the dura mater, on which about one dozen of these tumors adhere, and of some loose tumors taken from the muscles and of a part of the heart, where one of these tumors was imbedded.

On making a microscopic examination of these small bodies, it was found that in the largest number of those vesicles taken from the brain, the lenticular whitish central point was protruded, or else could be pressed out of the vesicles, and then appeared as a regular but folded cylinder with a blunted point, upon which four points and a double row of circular hooks were discernible; and under a magnifying power of ninety, the circle was even yet observable in specimens which had been preserved in alcohol. Many of the vesicles appeared contracted and atrophied, and contained very imperfect forms of the above named nuclei; some indeed appeared filled simply with chalky substance.

The small bodies above described evidently belong to that species of the animal kingdom known as *parasites;* they are, in fact, specimens of the cysticercus cellulosæ; and as the genetic conditions of these animals are so little known, it may not be without interest to draw up a *resumé* of our knowledge, so far as researches and experiments up to the present time have placed it within our reach. Lebert, Von Siebold, Küchenmeister, and Leukart, are the principal sources from which I have drawn the following experiments, facts, and deductions. The cysticercus cellulosæ has been described as follows, by M. M. Follin et Ch. Robin

(1849) :—when the body of the parasite is retracted into its caudal vesicle, one can see only a round dilatable foramen, through which the living animal protrudes its head. Upon the inner surface of the caudal vesicle, which is filled with a clear serous fluid, and around the just named foramen, there is placed in a depression in continuity with the tissue a spherical vesicle of the size of a small pea, which is immersed in the serum of the caudal vesicle, and is of the same structure. At the base of this small (nuclear) vesicle, upon the inner surface, and directly opposite the foramen, the body of the animal is imbedded in continuity of substance upon a narrow and curved pedicle.

The body consists of the pedicle and of a plicated membrane regularly and transversely striped, into which the neck and head of the animal is retracted. The neck is smaller than the body and less regularly striped; the head is larger than the neck but smaller than the body, and has four imperforate suction ducts on its sides. In front of the head and in the axis of the body is a small movable tuberosity, which also appears imperforate, surrounded by a double circle of from twenty-four to thirty-two tenaculi, a larger and a smaller alternately. The animal has neither digestive nor generative organs. The caudal vesicle consists of a finely granular homogeneous substance, of a peculiar appearance under the microscope. The structure of the walls of the body is the same as that of the vesicle, only differing in this point, namely, they contain numerous small granules composed of phosphate of lime.

The cysticercus cellulosæ consists, therefore, of a semi-transparent elliptical vesicle, varying in size from a lentil to that of a cherry, which contains a serous fluid, and the body and head immersed therein. The entire cylindrical worm, or parasite, is from four to ten millimetres long, stretching after death so that it is longer than the thirteen millimetre-wide transverse plicated fold or ampulla. The occurrence of these parasites is notoriously most common in the pig, and next in the muscles of the dog and deer. They are also found in rats, bears, monkeys, and in man. In the human subject, the animal has been found most frequently in the subcutaneous cellular tissue, in various groups of muscles of the body and extremities, in the substance of the heart, in the brain, and in the eye. In each of these different regions of the body, according to, and depending upon, the space allowed for development, the cysticercus cellulosæ takes on different

forms and attains to different sizes. Thus, in the cerebral ventricles and in the eye, the caudal vesicle sometimes attains the size of a walnut, and sometimes duplicate or alternately constricted forms. Sömmering was the first who observed this parasite in the eye of the living subject (human). Baum, Esthlin, Hœring, and Sichel, found it between the conjunctiva and sclerotica, and could easily extract the same by an operation. Sömmering and Schott discovered it first in the anterior chamber of the eye. A. Von Graefe has minutely described such a case. Von Graefe found it first in the vitreous humor, and in four cases upon the choroid. In the eye the animal is often distinctly discernible, causing sometimes entire loss of vision. The occurrence of the cysticercus cellulosæ in the brain has been more frequently observed. Lebert describes three cases from his own experience, all of which were accompanied by epilepsy.* The presence of these parasites cannot be diagnosticated, as the symptoms are those common to irritation and inflammation of the brain; or, such as arise from pressure upon certain sections of the brain or sets of nerves, causing epileptic convulsions. The existence of the parasite in the brain is certainly a source of great danger, inasmuch as a *single one* may prove fatal by exciting inflammation around itself. A. Stich (in the Annals of the Berlin Charity Hospital, 1854) describes a case of this kind.

The author of this paper also observed a similar case. A German emigrant was seized on board ship with dizziness and headache; an emetic was administered; hemiplegia now supervened; he was brought into the hospital at Ward's Island, and died after a few days. The autopsy revealed a cerebral abscess, in which was found a shriveled-up cysticercus cellulosæ.

The occurrence of cysticercus in the heart is, by no means, unfrequent, and usually produces no recognizable symptoms. M. Leudel, however, describes a case (in 1852) in which the existence of cysticerci in the heart muscles, some of them protruding into its cavities, caused endocarditis.

The animal frequently dies (either primarily, or secondarily through the effects of inflammation of the surrounding

*Besides the case described at the head of this article, I presented to the Society at its meeting of May 26, 1855, a preparation consisting of numerous cysticerci, taken from off the pia mater of a young girl that had suffered from chorea, and who had died under symptoms of laryngismus.

tissue); the caudal vesicle then collapses, its contents become opake and yellowish, the animal softens and dissolves, the tenaculi and chalky granules become free, the entire mass then thickens, and, finally, becomes a chalky concretion, around which the external membrane shrivels and becomes atrophied.

The existence of the cysticercus, for instance in the swine, (gargol) was well known to the ancients; Aristotle speaks of the "measles" of the swine (*χαλαζη*) as familiar objects known from the earliest ages. Possibly the frequent occurrence of this disease in the Oriental countries belongs to the causes which occasioned the interdiction of the use of pork among the Hebrews and other Oriental nations. That this "measles" belongs to the animal kingdom was, however, entirely unknown until towards the end of the seventeenth century; they were universally believed to be products of disease.

Redi, of Florence, in 1684, the first discoverer of the acarus of itch, was the first who publicly declared the cysticercus to be an animal organism. Hartman, a physician of Königsberg, Prussia, observed first in 1685 the movements of certain cysticerci in warm water, and Tyson, of England, (in *Philosophical Transac.*, 1691,) appears to have been another independent discoverer of the animal nature of the cysticercus.

These discoveries, however, appear to have gradually fallen into oblivion again until Pallas, in the year 1760, presented in his inaugural dissertation *(De Infestivis Viventibus intra Viventia)* the first description and the natural history of these curious and interesting animals. He looked upon the cysticercus as an independent and separate form of the tænia, and gave it a place as such (tænia hydatigena) in the zoological system. Pallas further proved that the cysticerci, all of them without exception, agree with the tænia in the essential elements and features of their structure, especially that the heads of the animals were provided with an identical circle of tenaculi and suction-ducts.

In the year 1782, a parson named Gœtz, of Quedlinburg, in Hanover, Germany, in an essay upon the natural history of intestinal worms, expressed himself to this effect, namely: That certain species of tænia and certain species of hydatids are connected. He was aware, for instance, of the identity of the cysticercus fascicularis of the mouse and the head of the tænia of the cat (tænia crassicollis), and their identity was accepted, and connection believed from this time on for

twenty years. When, however, Zeder in 1803—and the great Rudolphi—expressed their opinions in favor of a division between hydatids and tænia, and the latter (Rudolphi), in fact, put down Zeder's family of cysticerci as a separate *order* opposite to the tæniæ, the question was considered as settled for at least forty years. It was considered an independent creature, produced—*ex generatione æquivoca.*

About the end of the last decennium, however, under the impulse of a series of important discoveries, zoology underwent an astounding revolution. New ideas gained ascendency. It was necessary to become convinced that our conception of species could by no means be restricted by the limited evidence of complete identity; convinced that even the natural history of the helminthiæ could present a series of wonderful metamorphoses and peculiar conditions of development, and that *generatio æquivoca* was but a fiction of the imagination.

Already in 1842, Steenstrup, the celebrated discoverer of the alternation of generation,* attempted to throw doubts upon the independent individuality of the hydatid, and Dujardin, in his *Histoire Naturelle des Helminthes*, 1845, considers the hydatid simply as a juvenile condition of the tænia.

At this time, Creplin discovered that the hydatid found in the stickle back, the living neuter, (without sex,) tochistocephalus dimorphus, becomes changed in the intestines of the birds of prey of his host, into the complete cestodes tricuspidia nodulosa. Von Siebold applied this fact to other hydatids, and says that the cat becomes affected with tænia crassicollis, by means of the rats and mice which she devours, and in the livers of which a cysticercus fascicularis is seated, and declares (in *Wagner's Manual of Physiology*, 1845,) the hydatids to be lost, misplaced, undeveloped, and degenerated tæniæ, whose body degenerated into a bladder (become dropsical) without producing any generative organs.

These hypotheses, however, were doubted by many, inasmuch as no one had as yet presented any direct evidence in their favor. It was, consequently, a very fortunate idea of Küchenmeister, in Zittau, Saxony, to institute experiments on this point. Their results were decisive. He succeeded

* By alternation of generation, Steenstrup understands that phenomenon in which an animal produces young which are dissimilar to their mother, and remain so, but which in their turn produce young which themselves or else their progeny take the form of the primary pair.

(see Prague *Quarterly*, 1852,) in metamorphosing the cysticercus pisiformis of the rabbit into a common tænia in the intestines of the dog.

Numerous experiments were now made. Von Siebold and others fed dogs and cats upon the cysticercus pisiformis and fasciolocularis of rats and mice, and produced in them the corresponding forms of tæniæ. Küchenmeister, Haübner, Esherich, etc., transplanted the cysticercus cœnurus of the sheep, and produced the tænia cœnurus in the intestine of the dog; and, finally, Küchenmeister induced a condemned criminal to swallow a certain number of the cysticerci cellulosæ at various periods before his death (extending from seventy-two till twelve hours before execution), and found, forty-eight hours after his death, upon autopsy, ten young tæniæ, upon *four* of which the tenaculi of the tænia solium were distinctly visible.

It is, therefore, proven beyond a doubt, by these and other experiments, that certain hydatids are metamorphosed in the intestines of certain animals into tæniæ, whose heads and circle of tenaculi are identical. The process of metamorphosis is, in short, the following:—A living hydatid having reached the intestine in man or a certain animal, the caudal vesicles disappear, or the flattened, disjointed appendices thereof, and out of those scolices attached to the intestinal tube, the so-called head or basis of a colony of flattened sections is formed; each of these sections is separated from the other by a constriction or joint, and, therefore, called a link or portion, as their aggregate is a colony and termed a tænia. Those joints nearest the head are small, and apparently without signs of ability to produce a germ. The succeeding generation generally shows evidences of rudiments of sexual organs, and a tendency to produce germs for the propagation of the race; then follow sections with more and more clearly marked embryos; and in the last link, we find fully developed embryos enclosed in various layers of shells, being sometimes solitary in the shells, and sometimes aggregated; and which, are ejected from the body, mostly still enclosed in the section or capsule in which they are formed.

How long such a colony or stock may remain in the body is unknown, although the period of duration may be counted by years, during which time the body of the colony loses continually either the last sections or links, or even the whole colony up to the body proper, whose existence and retention in the intestine are alone sufficient to regenerate anew the entire colony.

The cysticercus cellulosæ is the hydatid for the tænia solium. Man becomes affected therewith chiefly by their introduction into the system by eating pork. In persons who are fond of, and often eat raw pork, sometimes thirty to forty of these tapeworms have been found.

The perfect tænia solium is from five to ten yards in length, and its perfect joints six to thirteen millimetres wide. It is of a dirty grey color, inclining to brown. Besides the already named four suction tubes, its head (scolex) has twenty-four to thirty-two tenaculi, placed in double rows, and enclosed in pouches or bags. The flat body (composed of a double membrane) shows at first only traces of, and afterwards more marked divisions, with interspaces between them, and are generally hermaphrodite, seldom without gender. When the first, we discern a penis, a glans penis, spermatic cord and scrotum, and a vagina, uterus, and appendages. The uterine branches, amounting to from five to ten on each side, end in the body, sending branches in various directions in its course.

The vascular system consists of four horizontal branches, running along the sides of the tapeworm, two on each side, which appear to have valves or ciliated epithelium.

The ova are brown, rough externally, nearly round, being about .016‴ in length and breadth, and contain a small embryo, i.e. a hyaline vesicle with six tenaculi.

The independent life of the links or sections of the tapeworm (called Proglottis by Dujardin), has been long insisted upon; they possess separate and independent motion. Pallas already observed their creeping several feet up the walls of a room. They possess the ability, even when separated from the body, to exist for a long time fresh and unimpaired, and in the white of egg they may be transported and retain their vitality for weeks. These sections separate from the body and deposit their ova* (sometimes already inside the intestinal tube, though generally not) occasionally while creeping upon the floor. They (the ova) are discharged with the excrements. Even after the death of the Proglottis, the ova retain their vitality for a time.

What becomes of the proglottides and their embryos? When do the latter escape from the ovum? Is it probable that some truly lose their track, and become hydatids, while others, namely, those that enter the intestinal tube, are developed into tæniæ?

* As many as 1,000,000 of ova have been found in one tænia solium.

To these queries even, modern research and experiment has supplied answers. Küchenmeister was not content with proving that hydatids become developed in the intestinal canal of certain animals, after losing their caudal vesicle, into tæniæ, but he denied the doctrine of Von Siebold, namely, that the hydatids are lost and degenerated tæniæ, or that they are at all specimens of abnormal development. He considers them as the larvæ of certain tæniæ; he takes the caudal vesicle to be a provisional organ (for nutrition and germination), suitable to the conditions of life of the larvæ, and asserts that *all tæniæ*, without exception, were developed from, and in fact had been, hydatids. Von Beneden and Steenstrup agreed in these opinions, but it was reserved for Von Siebold to place beyond a doubt, in his beautiful dissertation on the alternation of generation in the cestodes (in *Journal of Scientific Zoology)* that the cestodes in their development uniformly pass through various hosts; that they emigrate in the form of simple embryos with four or six tenaculi, still enclosed in their eggshells, and only later again return to their original hosts, having in the interim, as cysticerci, formed the head (scolex) of the so called tænia.

This process Stein first observed in 1853, in the larva of the tenebrio molitor (mealworm), and informed us to the effect that these embryos, after their transmigration into the intestine of the animal, escape from their membranes, perforate the walls of the intestine, and then after the loss of their tenaculi, locate and enclose themselves in the body of the animal. During this enclosure, after a time, the head or scolex is produced within it. Stein, therefore, asserted with right, that the cysticercus represents nothing more than the second stage of embryonal development of the tænia.

That this observation applies not only to the hydatids of the mealworm, but to all forms of tænia, even to all cestodeæ, have been sufficiently proven by the ample and copious researches of Guido Wagner (see *Transactions of Royal Leopold Carolinian Academy*, 1854), and this point of the embryonal condition and nature of the hydatid, is therefore incontrovertibly established. It came now to be of importance to prove by direct experiments the correctness of these relations in all instances, in other words, to adduce evidence that the ova of the respective tæniæ are really—constantly developed into hydatids. It was again Küchenmeister, who, at first alone (in 1853), and afterwards in asso-

ciation with Professor Haübner (1854–55), supplied the facts. They succeeded, by feeding certain animals upon certain kinds of tæniæ, in developing almost all known forms of hydatids; thus they produced, and sometimes in enormous numbers, the cœnurus (by means of tænia cœnurus) cysticercus pisiformis (from the tænia serrata), cysticercus tenuicollis (from the tænia tenuicollis), cysticercus cellulosæ from the tænia solium.

Numerous repetitions of these experiments by Van Beneden in Belgium, Escherich in Copenhagen, Rœll in Vienna, Gurlt in Berlin, Rudolph Leukart in Giessen, having constantly produced the same results, the question in regard to the genetic relations of tæniæ and hydatids may be considered as settled. It appears a fact, that the ovular membranes which contain the embryo, so soon as the ova in some way or other reach the intestinal canal of an animal, and never sooner, burst, as it appears, through a process of digestion, and the small creatures are thus set free. The embryo does not however remain in the intestine to be developed into tænia, but makes a way for itself with its six tenaculi, the front two of which are approximated into the form of a wedge, and serve to make a perforation, while with the others it is pushed onward through the walls of the intestine, and then migrates into the neighboring, or even distant cavities, muscles, and other tissues, excepting no portion of the animal body, not even the bones and their medulla. These migrations, as well as the traces they leave, have been observed in several species of the cestodes. Similar embryos have also been discovered in the blood, and termed hæmatozoæ by Eckel, Wedle, and Leydig. Rudolph Leukart succeeded four different times in experiments undertaken with special and sole reference to this point, by feeding certain animals with the embryo, in discovering and demonstrating the same in the portal vein, *unaltered* with its perforating apparatus; and we must suppose that they accomplish their journey at times through the vascular system, traveling with the circulation through the larger vessels, as the vena porta, and vena cava inferior; if so, many a problem in regard to their localization in different organs, as the liver, etc., would be solved.* Once located, these small vesicles or bladders

* In most species of the tænia it is necessary that the embryo be transferred to another animal in order to produce the hydatid. But in the case of the tænia solium it is possible, that as the cysticercus cellulosæ and the tænia occur in the same individual, the embryo of the tænia solium, when its ripe proglottis reaches the stomach itself, may produce cysticerci.

enlarge by the absorption of nutritive fluids, and after the lapse of a little time they contain, according to the species, one or more small turbid points upon their inner wall; and then the scolex or scolices finally sprout forth. Consequently the cysticercus is nothing more nor less than the necessary and natural second stage or period in development of the tænia from its embryo.

It is therefore proper to distinguish five different conditions in the development and history of the tænia: 1. The embryo with six tenaculi. 2. The cysticercus. 3. The scolex. 4. The jointed tænia, (strobila) and, finally, 5. The independently living and sexually developed joint or section (proglottis). The development of the cestodæ presents us therefore with a true instance of alternation of generation. Three different generations succeed each other in these animals:—the embryo with six tenaculi, as great nurse; the scolex, as nurse; and the isolated living proglottis, as the generic animal. The great nurse is the product of sexual development; she has her origin in the germinated ovum; while the two other generations are the products of budding or sprouting; the nurse from the grand nurse; the generic animal from the nurse. The intermediate conditions of cysticercus and strobila must be characterized as polymorphous colonies. The strobila might be compared to a colony of polypi, in which each individual is growing out of the posterior body of the scolex, their native soil, thus forming but one and a continuous line. Such a treble alternation of generation is also found in other animal organisms. Thus, Van Beneden and Van Siebold have already pointed out the analogy of development in the cestodæ and the trematodæ, in which the radiæ are developed from the flickering embryo, by means of germination within itself; and the cercariæ take their origin likewise in the same manner from the interior of the radia. This, however, must not be mistaken for the long known metamorphosis, e. g. in the frog, or in most insects with their larvæ, chrysalis, etc. By the alternation of generation, the generic animal produces *only* an unsexual race, which is dissimilar to its parent, and remains so; and this generation produces, by budding, generations of new animals, which, either themselves, or in their offspring, return to the original form of the stock; whereas, in the metamorphosis, the generation originally dissimilar to the parent gradually returns through changes of form to the form of the parent, and has not the power of propagation until it has passed through the prescribed metamorphosis.

From No. 89 of Edinburgh *Medical Journal*, for December, 1856, page 560, we take the following:—DR. RIECKE *on the production of the tænia, considered in relation to public hygiene.* It has been well proved by the experiments of Küchenmeister, that individuals fed on pork tainted with "measles," and containing the peculiar entozoon, called cysticercus cellulosæ, become subject to tapeworm. Various German writers have supposed that these entozoæ are destroyed by boiling, salting, and smoking the pork; and Dr. Riecke, of Nordhausen, has published a paper in which he recommends the prohibition of the sale of pork, unless it has previously undergone these processes. In support of his views, he states that tænia is an exceedingly frequent complaint in the neighborhood of Nordhausen, where there is a large consumption of raw pork by the people; and on the other hand, that at Altmark, where this practice is not prevalent, he has only seen six cases of this disease among about ten thousand patients who have been under his care during a period of fourteen years. He, therefore, considers that, in order to prevent the spread of this parasite, all pork should be prepared by salting and smoking before it is sold, or permitted to be used by the people.—*Henke's Zeitschrift*, 3. 1855.*

ART. V.—*Notes on some of the Relations of the Medical Profession to the Insane.* By M. E. WINCHELL, M.D., late Assistant Physician to the New Jersey State Lunatic Asylum.

Medical Education.—In every incorporate medical school there should be a course of instruction on psychological medicine. This course should be sufficiently comprehensive to meet every emergency which can be presented to the general practitioner. It should be held almost as essential to the attainment of a degree and due qualification for the responsibilities of general practice, as any of the prescribed courses. A ruined intellect is even a greater calamity than a shattered physical organism alone. The mind will sometimes act normally though united with a disabled body, but a sound body is useless without an intellect to govern it. Now, we are taught to look upon

* In connection with the production of tænia by eating raw pork, the reader is referred to an excellent paper by Professor Allen Thompson, Glasgow *Journal*, July 18, 1855; and also to Dr. Crichton's case, Edinburgh *Monthly Journal*, June 18, 1855. Professor Bennett entertains doubts (very justly, we think) as to whether the salting of pork is capable of destroying the vitality of the cysticercus. See his paper.—Ed. *M. J.*, Feb. 18, 1855. (*Trans.*)

such diagnostic symptoms as typhoid delirium and congestive mania as the ultimatum of the theory of insanity, and left to gather what knowledge we acquire, often, from the most deplorable experience. Among the works of Pinel, Esquirol, Spurzheim, Prichard, Beck, Ray, and a host of others, are found full and elaborate treatises on mental alienation, but not one of them is required in a preparatory course of reading, and our graduates are sent out as illy qualified to "minister to the mind diseased," and guard one of the most vital interests of humanity as though mental derangement was unknown. Insanity is not merely a symptom. It is sometimes a specific disease; and in all such cases requires a peculiar treatment; and as it invariably comes first under the notice of the general practitioner, he should clearly understand his duty in such cases, and be prepared to execute it promptly and intelligently. He should know *when* his patient is suffering with specific insanity, as well as how to advise; and a few remarks on this subject we hope will not be misappreciated, but tend in some degree to promote the welfare of that unfortunate class to which considerable of our time and attention has been devoted.

Importance of Early Treatment.—It is of the first importance to know *when* a person is insane. That form of mental derangement consequent upon febrile and typhoid conditions or accompanying any acute cerebral disease or lesion of the brain, and which generally passes away with the physical derangement, is easily recognized by every practitioner, and is not inappropriately styled symptomatic insanity. But there is another form in which it often eludes the closest scrutiny of the inexperienced observer for months, and even years; and for lack of timely detection and prompt treatment, the subject of it becomes a confirmed lunatic; his happiness and intellect a hopeless wreck. This form may be styled, for the sake of distinction, idiopathic insanity, and it is with this that we have principally to deal. It is a fact familiar to every one accustomed to the care of the insane, that the probability of recovery bears an inverse ratio to the duration of the disease, and that the earlier proper treatment is adopted after the first aberration of reason, the greater are the chances of recovery, and the earlier the probability of that result. In confirmation of the fact that the probability of recovery diminishes as the duration of the disease increases, the following extract is made from the per cent. table of the Report for 1855 of the State Lunatic Hospital, at Worcester,

Mass. This table embraces 2,284 cases, and covers a period of twenty-one years.

	1834	1835	1836	1837	1838	1839	1840	1841	1842	1843	1844
Per cent. of recovery of recent cases..	82	82	84	89	86	90	91	91	91	88	93
Per cent. of recovery of old cases	20	18	19	25	15	17	22	21	16	29	24
	1845	1846	1847	1848	1849	1850	1851	1852	1853	1854	1855
Per cent. of recovery of recent cases ..	89½	79	72	86	84	87	82	77	83	80	92
Per cent. of recovery of old cases	31½	28	17	19	24	21	18	18	24	29	17

The average recovery of recent cases, by the above table, is eighty-nine per cent. The average recovery of old cases, by the same, is twenty-two per cent.

This table alone is sufficiently comprehensive to prove the importance of the earliest possible adoption of the proper means of recovery, and of that psychological knowledge which will detect the slightest deviation from a normal condition of mind.

By the report for 1855, of the Western Lunatic Asylum, Va., the proportion of recoveries since July 1, 1836, of all cases discharged of twelve months' duration and less, was 77.29 per cent. And the proportion of recoveries of all cases discharged for the same time, of more than twelve months' duration, was 30.60 per cent.

By the report for 1853 of the New York City Lunatic Asylum, at Blackwell's Island, it appears that of two hundred and seventy-one recoveries of that year, one hundred and fifty-three were of less than three months' standing; forty-seven were of from three to six months' standing; forty-two were of from six to twelve months' standing; twenty-four were of from one to three years' standing; and five were of from three to six years' standing. In other words, of two hundred and seventy-one recoveries two hundred, or 73.80 per cent., were cases not exceeding six months' duration.

The distinguished Dr. Brigham, in his second Report of the New York State Lunatic Asylum, remarks, "There are few serious diseases in which early treatment is more essential to recovery than insanity; and few in which it is more likely to be successful. A large majority of recent cases recover when subjected to early and judicious treatment."

In the Report for 1855, of the same institution, the following table occurs, "showing the duration of insanity previous to admission, and the period under treatment of the one hundred and twenty-eight discharged recovered."

	Duration before admission			Duration under treatment		
	Male.	Female.	Total.	Male.	Female.	Total.
Under three months - - -	58	40	98	22	8	30
Under six months - - - -	4	11	15	24	16	40
Under twelve months - -	3	4	7	17	21	38
Over one year and less than three	3	—	3	7	12	19
Over three years and less than five	2	1	3	—	1	1
Over five years and less than ten	—	1	1	—	—	—
Over ten years - - - -	—	1	1	—	—	—
	70	58	128	70	58	128

It will be seen by the above table that one hundred and twenty, or 93.75 per cent. of those recovered were placed under treatment within a year after the invasion of the disease; and one hundred and eight, or 84.45 per cent. were restored in less than a year after admission.

The importance of early treatment being apparent, its bearing upon the question, *when* a person becomes deranged, and the importance of well-defined notions on the subject, is clear and inevitable. A want of proper knowledge on the point has given occasion for some very stupid errors, attended by fatal consequences. Not long since a person of refined accomplishments, wealth, and high social position, was admitted to one of our hospitals for the insane, in a state of hopeless derangement, accompanied by a letter from her attending physician, stating that he had for a long time delayed executing the necessary certificate for her detention in an asylum, "*Because he could not certify that she was wholly insane.*" As though the intellect must become a perfect wreck, with not one vestige of reason remaining, before a person can be said to be insane. Thus a mind of bright promise was ruined and doomed to life-long misery; and a wide circle of fond friends was cheated of a precious hope by the almost criminal ignorance of one to whom was committed the sacred trust. This is but an illustration—a single instance—of what is occurring every day, and almost every where.

When is a Person Fit for Treatment?—The first oscillation of reason is a mark of so much insanity. The first staggering under light truths, such as every child understands, is evidence of enfeebled intellectual powers. As soon as a man begins to think his legs are glass, though he may be a good judge of a leg of mutton, and may make as shrewd a bargain for a house or a farm as ever in his life, he is a proper object for medical treatment. The moment a man begins to believe he is a steam engine, though he may be as careful a stock-

broker as any in Wall street, and may be as exact in all the ordinary proprieties of life as ever, that moment he begins to be insane. When a man begins to fancy himself vastly richer than he really is; likes to drive at unaccustomed rates, and dash around in four-horse teams; becomes irregular in his habits; wakeful at night; loquacious; confident; inordinately extravagant, or generous, and thinks that this is all right; it is then time to call in his medical advisers.

Mental derangement is often so obscure in its commencement, and so insidious in its development, that the ordinary observer sees nothing wrong, and the most practiced expert may be for a time misled, or led into doubt. It may be, and sometimes is, so studiously and skillfully concealed as to be detected only by stratagem, or by long-continued observation and inquiry. Suicidal derangement is often of this character. Subjects of it sometimes practice the most consummate adroitness in concealing and executing their plans, and may be apparently sound in all respects, except the hidden purpose of self-destruction. They seldom, if ever, attempt it in presence of witnesses, or under circumstances which would lead to their detection before the act is completed. We have evidence of this in nearly every day's reports of suicides where no tendency that way have been suspected. There is a popular notion that if a person can lay and execute a good plan, superintend his affairs prudently, and uses his accustomed forecast, he cannot be deranged; but any one at all familiar with hospitals for the insane knows how frequent and well laid are their plans for escape, or for the gratification of pique or for pleasure.

Mr. Haslam relates the case of an Essex farmer who counterfeited recovery so well that he obtained his liberation, and having been sent back, attempted the same deception again. "He spoke of the treatment he had received from the persons under whose care he was then placed, as most kind and fatherly; he also expressed himself as particularly fortunate in being under my care, and bestowed many handsome compliments on my skill in treating his disorder, and expatiated on my sagacity in perceiving the slightest tinges of insanity. When I wished him to explain certain parts of his conduct, and particularly some extravagant opinions respecting certain persons and circumstances, he disclaimed all knowledge of such circumstances, and felt himself hurt that my mind should have been poisoned so much to his prejudice. But when I informed him of circumstances he supposed me

unacquainted with, and assured him that he was a proper subject for the asylum which he then inhabited, he suddenly poured forth a torrent of abuse; talked in the most incoherent manner; insisted on the truth of what he formerly denied; breathed vengeance against his family and friends, and became so outrageous that it was necessary to order him to be strictly confined. He continued in a state of incessant fury for more than fifteen months."

Those afflicted with hallucination sometimes for various reasons conceal their peculiar belief, and thus deceive for a long time those most intimate with them. The man who fancies he sees persons about his mansion, and hears them threaten his property or his life, may prefer to conceal his hallucination, although he may believe it a reality, rather than compromise his dignity by an open rupture with them, or his reputation by a confession of existing suspicions, or a knowledge of any of his fancied realities.

Illusions and nearly every species of monomania may, for similar reasons, be concealed for a long time, without the most careful scientific investigation, and until the physiological condition on which they depend shall have become confirmed and incurable.

Dr. Ray, in his eminent treatise on the "Medical Jurisprudence of Insanity," relates the following case:—"A woman once came under our care who was reported to have had several previous attacks, but beyond this the history of the case happened to be exceedingly imperfect. For three months her whole discourse and deportment were without fault or blemish. She was calm and quiet in her ways, affable and intelligent, and exerted a healthful influence upon those around her. In regard to her own case, she complained that she should be banished from society, and especially from that of a young and beloved daughter, who was then cast upon the mercy of strangers, and for no other reason, as she said, but the superior force of a tyrannical husband. She then would launch into a long and circumstantial account of the sufferings she had experienced by poverty, sickness, and every species of privation by his habitual intemperance. He finally crowned his iniquities two or three years before by shutting her up in a hospital for the insane, and finally added, as a great secret, not to be told at all, that he employed a man to go to the hospital every day to beat her soundly with a stick. Towards the end of the above period, she suddenly became agitated and

irritable, and finally raved. In this condition she continued about six months, when she began to improve quite rapidly, and in the course of a month or two she went home entirely restored, with her husband, whose conduct she then admitted had always been most exemplary."

The Huntington Case.—The recent case of Charles B. Huntington, convicted of forgery in December last, at the December Term of the Court of General Sessions, in this city, is one of those obscure cases which prove severe tests of the skill of even medical experts. It will be remembered that in this case moral insanity was the theory of defense. The public mind is so unused to the scientific signification of the term "moral insanity," that its popular acceptation is synonymous with moral depravity.

Not being regarded in its true character as diseased psychological manifestations, depending upon organic lesion of the brain, it is reluctantly admitted as a plea for crime, and we are not surprised that the press, through motives of well-known policy, should lend its influence in confirming this popular error, by parading at the head of its columns such captions as the following: "A New Kind of Insanity Discovered," etc. Thus, in opposition to medical testimony coming from sources entitled to high consideration, the court, not denying the truth and justice of the defense of moral insanity, nevertheless charges the jury to reject it as not recognized in law, and to find the prisoner guilty if, at the time of committing the forgery, he could discriminate between right and wrong.

Moral Insanity.—This is but one instance among many of frequent occurrence of the antagonism of the rules of law and those of science on this subject. All authentic scientific treatises on insanity admit this form; and, as the laws of science have hitherto helped to shape our civil laws, we ought to expect soon to see the obnoxious statutes remodeled. We hope, at least, for the sake of humanity, they may be.

But, however much the decisions of the courts may differ from the tests of science, we are ready to accept this particular case as a fair type of a large class coming under this generic denomination. The difficulty in recognizing these cases is clearly apparent. To do so successfully, the observer should have well-defined notions of this form of mental disease. Some of its characters are thus described in a work published in the beginning of the present century.

They are those most calculated to mislead an unskilled observer. "I refer to cases in which individuals perform most of the common duties of life with propriety, and some of them, indeed, with scrupulous exactness; who exhibit no strongly-marked features of either temperament; no traits of superior or defective mental development; but yet take violent antipathies; harbor unjust suspicions; indulge strong propensities; affect singularity in dress, gait, and phraseology; are proud, conceited, and ostentatious, easily excited, and with difficulty appeased; dead to sensibility, delicacy, and refinement; obstinately riveted to the most absurd opinions; prone to controversy, and yet incapable of reasoning; always the hero of his own tale; using the most hyperbolic, high-flown language to express the most simple ideas, accompanied by unnatural gesticulation, inordinate action, and frequently by the most alarming expressions of countenance. Persons of this description, to the casual observer, might appear actuated by a bad heart, but to the experienced physician, it is the head which is defective."

Although there may be diversity of opinion in regard to the condition of Huntington's mind, we think there can be no question that a proper course of moral and medical discipline—schooled in a lunatic asylum instead of in Wall street—would have been attended with highly salutary results.

Hospitals for the Insane.—The fact of the existence of insanity in any given case having been established, treatment cannot be commenced too promptly. But what shall that treatment be? It is needless to multiply words in proof that well-regulated hospitals for the insane are the only means of realizing the fullest known advantages of treatment. Having had some experience in the management of these institutions, I confidently assert that seldom, if ever, an insane person is detained in an asylum without being benefited by such detention. Such has been the result of my observation. I do not mean to be understood that they almost invariably become sane, or even less insane; but that such a result is far more probable, and that their general condition is almost sure to be better than that attending the best of private care.

But there are often certain difficulties attending the removal of an insane person to a hospital, and certain precautions are sometimes necessary to accomplish it discreetly and successfully. Most insane people object to the change

on the ground that it is unnecessary, because they regard themselves as sound, mentally, as their advisers; and it is certain that in some instances they seem to exhibit more adroitness, if not better sense.

As a rule having no exception, *all dealing with the insane should be honest and truthful.* Avoid all deception and duplicity; secure their confidence, and convince them of your friendliness, and they will yield to almost any reasonable request.

Whatever may be the condition of the patient's mind, whether quiet or furious, let the medical adviser be called; one on whom he is accustomed to rely, and let him candidly state the patient's condition in his hearing, and recommend a removal. Acting upon that advice, let the friends gently and dispassionately, yet firmly proceed to the task, and there will rarely be much reluctance on the part of the patient.

A large share of the difficulty in obtaining a patient's consent to removal comes from the indiscretion of friends, and the popular horror of asylums, growing out of ignorance of their true character. Let the friends acquiesce punctually and cheerfully, and the patient will generally be easily persuaded. If he is brought to the asylum, and confined there by a process of deception, supposing himself merely on an excursion for pleasure, as is sometimes the case, or destined to some public resort where he can indulge his wishes without restraint, until he finds himself secured behind bolts and grates, he at once loses confidence in those he before regarded as his friends; he feels wronged and irritated; looks with suspicion upon any one he meets, especially the officers of the institution, whose chief desire is to command his confidence, and assure belief in their good intention towards him. He thus begins hospital life under the most unfavorable impressions, and under circumstances calculated to essentially retard his recovery. His removal has become a positive injury to him, whereas, if properly conducted, it could have been attended with no harm.

It may sometimes be necessary to use coercive measures; better do this than deceive him. Coercion, when needful, should always be tempered with kindness. When arrived at the asylum, the medical officers then know their duty; and if an explanation has not been made, will insist upon a fair understanding between the patient and his friends before they leave him, in order to defend themselves against the

charge which patients so often make, that they are unjustly confined.

Blood-letting.—No well-informed physician needs to be cautioned against the reprehensible practice of blood-letting, as recommended by Dr. Rush. Although he justly has ranked high as authority on this subject, great improvement has been made in the therapeutics of insanity since his day. When a physician is called to an insane person, especially if he be laboring under much delirium, or general mania, it is a too common practice to resort to depletion, and especially to the disastrous form of blood-letting. If a patient is wakeful and boisterous—in a continual excitement—he will very soon need all the vital force nature can supply, to keep him in existence.

Dr. Luther V. Bell, in his report of the McLean Asylum for 1841, remarks: "Each year that I have passed in this extensive field has served to diminish my confidence in active medical treatment of almost every form of disease of the mind, and to increase my reliance upon moral means. No individual at the head of an insane institution would now think of combating any form of insanity with the depleting and reducing means once regarded as indispensable. The practice of bleeding, violent purgatives, emetics, vesicatives, and derivatives has passed away before the light of experience. The treatment best suited to inmates of a hospital is also best suited to them before their admission."

Dr. Samuel B. Woodard, in the Twelfth Annual Report of the Lunatic Hospital at Worcester, Massachusetts, remarks: "All agree that depletion, by which I would be understood general bleeding and active cathartics, is not favorable in insanity, as it rarely affords more than temporary relief, and, frequently used, produces injurious effects."

Dr. A. Brigham, in the Fifth Annual Report of the New York State Lunatic Asylum, remarks: "The treatment of insanity by bleeding, though strongly recommended by Dr. Rush and some others, we believe to be generally improper and frequently very injurious; sometimes it appears to produce a fatal result, and we are confident that it not unfrequently renders cases incurable. Some physicians appear to consider great maniacal excitement, vociferation, and violence, as sufficient evidence of inflammation to have recourse to general bleeding; but, as we have said, this is usually a sad mistake. No regard, whatever, should be paid to the mere excitement and violence of the patient as furnishing indication for bleeding."

Dr. Pliny Earle, at the conclusion of an elaborate collation of evidence on both sides of this question of blood-letting in mental disorder, makes the following as the first among other deductions: "1. Insanity in any of its forms is not of itself an indication for bleeding. 2. On the contrary, its existence is of itself a contra-indication. Hence, the person who is insane should, other things being equal, be bled less than one who is not insane."—*American Journal of Insanity.* Vol. 10, p. 402.

I will add, that I have often remarked disastrous results occurring where large quantities of blood had been abstracted by the general practitioner before admission to an asylum. Such cases almost invariably result fatally, either in death, dementia, or some chronic form of mental disorder; at best, their recovery is protracted, tedious, and always doubtful. This theory will hold true in regard to vesicatives, drastic cathartics, and depletory agents in general.

299 WEST 35TH STREET, NEW YORK.

ART. VI.—*A Case of Hydrophobia, following the Bite of a Dog—Death—Autopsy.* By JAMES B. REYNOLDS, M.D., House Physician to Bellevue Hospital.

James Hutchinson, æt. 16; admitted into Bellevue Hospital, December 13, 1856. (Service of DR. ELLIOT.) The patient was a healthy, robust lad, of nervous temperament. During the latter part of August, 1856, while attempting to catch a dog, he was bitten in the left hand, between the index finger and thumb. The dog was not considered rabid, but was immediately killed by the patient, and the wound, in the course of half an hour, was burned out by nitrate of silver. A man was bitten on the same day, by the same dog, but up to the present time is healthy. The cicatrix has since been the seat of an uneasy sensation; but, with this exception, all went on well until Wednesday, December 10, when his parents noticed that he was dull, and had an undefined fear, not being willing to go out at night, or to be left alone in a room by himself. The morning of Friday, the 12th, he did not eat his breakfast with his accustomed relish, complaining of a general feeling of malaise; he partook of but little dinner. Up to this time, he had complained of no difficulty about the throat; but during the afternoon he began to have some pain over epigastric or

lower sternal region, which gradually rose up to the throat, assuming there a choking character. A dose of senna and salts was, during the evening, given to him, which he, by several attempts, managed to swallow; it operated freely; he did not sleep at all during the night, for fear of suffocating. Saturday morning, the 13th, a doctor was called in, and pronounced it a case of hydrophobia, and advised removal to Bellevue Hospital. When brought in at a quarter after three P.M., he was very much excited, having considerable difficulty in breathing, the spasms of choking being very frequent and severe; at first, he assumed an upright position upon his knees, with his head thrown back, face and lips, during a paroxysm, becoming of a dusky hue, hardly livid, eyes projecting with a wild-frightened stare and slight external strabismus; considerable jactitation or restlessness; extremities cool and moist, with feeble circulation; respiration was very irregular—a long deep sigh, followed by a succession of short, catchy inspirations—nearly sobbing, together averaging thirty-six per minute; pulse, 96, of natural fullness, but very irregular, varying sometimes fifteen beats in a quarter of a minute; he soon became comparatively quiet, when he was able to lie down, with head and shoulders raised. Pulse fell to 86, and paroxysm much less frequent. When first admitted, water was given him to drink, when he became convulsed, but by clutching it with both hands, and making several trials, he at last got it to his mouth, but not more than a tea-spoonful could have been swallowed; the remainder was forcibly ejected. Another attempt was again made after a few minutes, but he was unable to get it to his mouth; his eyes being most of the time turned from it. Upon the entrance of a number of students, he became very much excited, which excitement was much increased, or rather aggravated into a paroxysm, by a draught of air from a window suddenly raised. The convulsion was again brought on by using a fan near him; water was handed to him, and after some persuasion, he forcibly grasped the glass, and gradually bringing it to his mouth, gulped down an ounce or two. A small and imperfect looking-glass was then brought near and opposite to him, but with little effect at first, though at last it excited a convulsion. After the withdrawal of the class of students, he became comparatively quiet, but the spasms were gradually, but perceptibly, increasing in frequency and force.

At five P.M., he was seen by Dr. Elliot, the attending

physician. Twenty-four dry cups had just been applied to spine, laudanum ʒij, but with the addition (through a mistake of the nurse,) of gr. vj of the aqueous extract of opium, and powder of assafœtida ʒss, was given per rectum; he drank some water and also some wine.

Seven P.M.—Another enema of extract of opium and assafœtida, but with only ʒi of laudanum, was again given; he now became drowsy, sleeping at intervals, but waking with a convulsion, and much frightened.

Eight P.M.—Becoming slightly delirious, wishing to rise and dress, as he thought it time to go to school; but upon all other subjects, as far as could be ascertained, he was perfectly rational; his mind was morbidly acute; when asked to do any thing, he would immediately control his restlessness or jactitation, and instantly obey, appearing to be very anxious to comprehend and do what was bidden. About this time, he began to have slight spasmodic actions of diaphragm, accompanying or causing the rejection of whatever the stomach contained; the vomiting or rather difficult retching gradually grew worse, until, at last, it became one of the most marked and distressing symptoms.

Nine P.M.–The patient was now seen by Drs. Metcalfe, Wood, Stephen-Smith, and other medical gentleman. He became much excited by the presence of so many strangers. After becoming calm, Dr. Metcalfe asked him whether he suffered from pain any where; he answered that there was pain in his breast, placing his hand over the sternal region. Water was then poured into a bowl upon the floor, without his knowledge; but the sound caused a convulsion. A speck was then pretended to be seen upon his forehead, which was gently blown upon, producing much excitement, and the continuing it brought on spasms; even the breath of the attendant would excite him. Warm milk-punch was then handed to him; as he would allow no one to hold the cup, he clutched it with both hands, and gradually, but spasmodically nearing his mouth, he gulped down the whole (about four ounces). Chloroform was then cautiously administered to him; even the vapor excited convulsions; it acted badly, causing lividity of the face, and close contraction of the pupils, which before were dilated; and nearly suspending respiration. He came out of the effects of the anæsthetic with a convulsion. When going under the effects of chloroform, he made some movements which seemed very much like attempts to bite. It was proposed by Dr. Wood to perform tracheoto-

my, and introduce a tube through which the patient might breathe, instead of through the irritated larynx; but one of the medical gentlemen rather opposed the operation, on the ground that patients with hydrophobia do not die with symptoms of asphyxia. During the evening he said, to use his own words, that "the doctors wished to make him out mad; but he knew he was not, because he had killed the dog, and his father had paid the doctor fifty cents for burning out the bite. He had the "nerves." Another injection of laudanum was given, and also brandy by the mouth; he had already taken about eight ounces of wine, and three pints of milk.

Ten P.M.—Convulsions and vomiting increasing, and opisthotonos more marked. From the horizontal posture, he would suddenly spring upon his feet or knees, and stare wildly at some visionary object, and attempt to get out of its way; all the time spitting a tenacious, ropy mucus; head thrown back. About this time, he imagined that he had a pig in his mouth, which he at last, with difficulty, expectorated by the advice of the nurse; he also complained of a sensation of hairs in his mouth.

Eleven P.M.—He now became quite delirious, calling upon his parents and friends, and at times complained of headache; pulse too frequent to count, and very irregular. Injections continued.

Half-past twelve A.M.—He was now seen by Dr. Elliot. His tongue was cracked transversely, but not dry; the saliva, being very tenacious, and streaked with blood, was with great difficulty expectorated. The convulsions gradually increasing in frequency and force, were now very violent, requiring two attendants to hold him; for as soon as the paroxysms were over, he would immediately sink upon the bed exhausted. He died very suddenly at quarter-past one A.M. on Sunday, December 14; living from thirty-three to thirty-six hours after the disease showed itself plainly, and ten hours after entering the hospital. His death was from exhaustion. The thoracic walls were immediately compressed; the air within being pressed out, and over the vocal cords, gave rise to a sound of very high pitch; so natural and shrill a shriek was it, as to startle all present, showing the vocal cords to be in a state of tension. Artificial respiration being continued, the same sounds resulted, but less markedly.

Post-mortem examination thirteen hours after death (dictated by Dr. Metcalfe).—Rigor mortis well marked; body well developed; foam escaping from mouth; marks of the dog

bite on the left hand, at the root of thumb; tendency to ecchymosis on dependent parts; scalp congested; best marked on posterior part of left parietal bone. On making an incision along the back, about ℥iss of black fluid blood escaped; also, blood between bones and membranes of cord; the spinal cord, on being removed, presented no morbid appearances; on opening the theca, there was considerable congestion of the vascular membrane, the blood being fluid. On removing the calvarium, the vessels of the dura mater were very much engorged; on removing this membrane, the pia-mater was found congested; puncta vasculosa abundant; contrast great between cortical and medullary substance; cortical darker than usual. The heart was contracted, showing what formerly would be called a marked case of *concentric hypertrophy.*

It is to be much regretted that a tube was not placed in his trachea as soon as he entered the hospital. Although patients, as a general rule, do not die by suffocation, yet it is conceded that the throat is the principal source of irritation, and from it arise many of the most aggravated symptoms; and the involvement of other parts of the system seems to be secondary, or at least to be aggravated by the spasms of the throat. Now, by the insertion of a tube into the trachea, one source of irritation, the continual passage of air over the irritated parts is removed, and they are allowed to *rest;* one of the most efficient of nature's means for the restoration of a part to its normal state.

If I was so unfortunate as to be attacked by this awful disease, I would insist upon the introduction of a tube into the trachea as soon as the disease was recognized, and that all remedies should be given per rectum.

ART. VII.—*Reports of the Practice of the New York and Bellevue Hospitals.*

NEW YORK HOSPITAL.

REPORT of cases treated in the Medical Department of the New York Hospital, during the months of July, September, and October, 1856. By H. D. BULKLEY, M.D., one of the Attending Physicians.

The whole number of cases treated in the medical wards of the New York Hospital during the month of July, 1856, was two hundred; and during the months of September and October, three hundred and thirty, making the total number during the three months, five hundred and fifty. The number of deaths during July was twenty-two, and during September and October twenty-nine, making the whole number

forty-nine during the three months; equal to a little less than nine per cent. Among the deaths in July, were three by collapse in remittent fever; four by yellow fever; two by disease of the brain; two by tubercular diarrhœa; two by exhaustion from heat; and one by hæmoptisis; most, if not all, of which afforded little or no chance for treatment. All but one of the patients with yellow fever had black vomit at time of admission, or very soon afterwards. The patient with hæmoptisis was a seaman, and died in a few minutes from asphyxia, caused by a most fearful hæmorrhage, the attack coming on during the visit, and while he was dressed and sitting in his ward. Of the twenty-nine deaths during September and October, eight were caused by phthisis; two by yellow fever; two by disease of the heart; one by aneurism of the aorta of an enormous size; and two by disease of the brain; and if these, with the cases in July which afforded little, if any, chance for treatment, are deducted from the total number of deaths during the three months, the per centage will be reduced to four per cent. Still further allowance must be made for the number of cases brought to the hospital in an exhausted state, and in the last stage of disease, when little or no hope of life remains. Among cases of this nature during the period embraced in this Report, were three cases of diarrhœa; four cases of delirium tremens, three of which were complicated with convulsions; and one with gastro-enteritis, in a man with a broken down constitution, etc.

The number of cases of dysentery during a season of the year where they have, heretofore, been numerous, was remarkably small. Of the few cases admitted, or which originated in the hospital, but one or two were severe, and none were fatal. Malarial disease, as usual, furnished an abundant supply of patients and in great variety, embracing many cases of much interest, the whole number reaching eighty-five, of which twenty-one were in July, and the remainder in September and October.

Typhoid Fever.—During the short interval from the 14th to the 31st of October, inclusive, eight well-marked cases of the abdominal variety of typhus fever, considered by some as a distinct species, under the name of "typhoid" fever, were admitted into the hospital; none of this variety having been noted until the first of these periods. Of these, six were in males and two in females, and they were of ages varying from fifteen to twenty-three years. They came from different parts of the country—some from New England; some from the South; and some from the city. Diarrhœa was an early and prominent symptom in seven cases; epistaxis was an early symptom in four; rose-colored spots occurred in all but one, and in this case there was an abundance of sudamina; and in one case there were both rose-colored spots and sudamina. In one only, a stage driver from the city, who had been sick three weeks when admitted, there were rose-colored spots without either diarrhœa or epistaxis. In no case did the pulse exceed 100; and in most of the cases it ranged from 80 to 90, and in two or three cases was dicrotic. The two patients with it (brothers) who entered on the 14th, were in full convalescence, and two others, who entered on the 23rd and 25th, were doing well on the 31st, when my term of service ended, and all were then in a promising condition.

The treatment was very simple, mostly expectant. Opium was given to check the diarrhœa when urgent, and beef tea, and in some cases, wine whey, when the pulse seemed to indicate its use; but stimulants were either not required at all, or to a limited extent, and for a short period. Ice was given freely in the early stage.

There were under treatment during the months of September and October, fifteen patients with paralysis, embracing cases differing in their form and in their cause, some of them interesting in their nature, and which we hope to be able to make the subjects of future record and remark. Our present limits, however, will only allow us to make selections from the many cases of disease of interest which presented themselves during the three months embraced in our report, to which we must confine ourselves.

Ovarian Disease.—Three cases of ovarian disease were admitted into the hospital during these three months. One of these was in a widow, 58 years of age, whose abdomen was very much distended with fluid, and in whom the physical signs and the history of the case rendered the diagnosis easy; and the second, in an unmarried female, 21 years of age, in whose abdomen a tumor could be distinctly felt, but respecting the exact nature of which there was some difference of opinion. The third case, and the only one subjected to treatment, and hence worthy of any special notice, and which in its progress and result was not without interest, was in a healthy looking Irish woman, 35 years of age, with sandy hair and complexion, who came from Dunkirk, in this State, for advice, and entered the hospital July 25. She had been the mother of five children, the youngest of which was 18 months old, which had but recently been weaned. Her general health had been good, and she had suffered from nothing, except slight attacks of malarious disease at times, which had left no sequelæ, as far as could be ascertained. Her menses had been regular since the weaning of her last child. Soon after the birth of this child she experienced some difficulty in making water, but suffered no pain at that time, and perceived no swelling of her abdomen. About two months after her confinement, however (sixteen months before entering the hospital), she had pain in both iliac regions, which lasted three weeks and then left her, but afterwards returned, when she first began to notice slight enlargement of the abdomen. This enlargement gradually increased until it became inconvenient from its size, when she was led to seek for relief.

On examination, the abdomen was found largely distended with fluid, fluctuation very distinct, with entire dullness over the whole of the umbilical, epigastric, and iliac regions, with very slight sonoriety over the hypochondriac regions. The abdominal tumor was perfectly smooth, tense, and elastic, and no distinct tumor or tumors could be felt. On examination per vaginam, the uterus was found in its normal situation, its anterior lip slightly enlarged, and the os tincæ somewhat patulous; otherwise healthy. The general health was good; appetite fair; bowels regular; sleep natural; the urine was scanty in quantity, turbid, and of a rather dark color, and free from albumen. She suffered from nothing but the great enlargement of her abdomen.

As some doubt at first existed as to the exact nature of the case, she was put under the use of diuretics, several kinds of which were used, and afterwards of mercurial alteratives, which very decidedly increased the quantity of urine at times, but without any diminution of the swelling of the abdomen. Feeling now fully confirmed in the opinion early formed, that it was a case of unilocular ovarian disease, and that, consequently, internal remedies would be of no avail, it was decided, with the approbation of my colleagues, to relieve her of the fluid, for the double purpose of affording her at least temporary relief, and of being better able to judge whether the resources of surgery could afford any hope of ulterior aid. Accordingly, on the 9th of October, I drew off three hundred and seventy-five ounces (nearly three gallons) of a ropy fluid, of about the consistence of thin molasses, of a dark greenish color, which coagulated so firmly, both by heat and nitric acid, as to form almost a solid mass. The operation was performed in the usual way, by puncturing the walls of the abdomen in the median line between the umbilicus and pubis, and care taken to prevent any escape of the fluid into its cavity. After the withdrawal of the fluid the walls of the cyst could be distinctly felt in a collapsed state within the abdomen, and but a single cyst could be detected. Patient was somewhat exhausted after the operation.

Besides several physicians and students who were present throughout the whole, Dr. John L. Atlee, of Lancaster, Pen., accompanied by my colleague, Dr. Joseph M. Smith, came in toward the close. Dr. Atlee, whose name is well known in connection with this class of affections, examined the patient, approved of the operation, and stated that the case was a favorable one for the removal of the cyst by the knife, after the lapse of the proper period of time.

October 11 (Second day after the operation).—Complained of some pain in left side of abdomen, which was, however, not severe, and which she described as superficial. No pain on pressure over abdomen; bowels opened freely yesterday morning; has had some vomiting; pulse 100. She was now put under the use of opium, in pills of one grain each, to be taken at intervals of from one to three or four hours, according to the urgency of the symptoms.

On the following day (October 12) there was some pain on pressure over the abdomen, but the skin was soft, and at times bathed with profuse perspiration, and her pulse was 92, and soft.

The next day, the bowels not having been moved since the 10th, the opium was suspended, and an enema given.

October 14.—No effect from enema. Ordered—calomel grs. x., to be followed by castor oil.

October 15.—No effect upon bowels, but is free from pain. Pulse 92, and quick; skin soft and moist.

On the 16th there was a small passage from the bowels, and she felt better, and the pulse was slower.

October 19.—Had an enema last night, which produced a copious discharge from the bowels, and was followed by a feeling of relief. Suffers from nausea and vomiting occasionally, throwing up several times in the day moderate quantities of a greenish-colored fluid.

October 21.—Bowels moved without aid. She was free from pain. Pulse 84, and soft; appetite poor; nausea and vomiting at times. About this time her tongue began to become red and dry, and the stomach retained but little food. Opium and morphine were occasionally given, also stimulants and mild vegetable bitters, as infusion of prunus virginiana, etc., but the skin was very much relaxed; and she complained of great exhaustion. There was constant and urgent thirst, to allay which ice was freely used. The abdomen began to increase in size again about this time, although the exact period at which this increase commenced was not noted, but there was not the least pain on pressure over it, and the swelling was evidently tympanitic in its character, and was distinctly circumscribed. From the absence of pain upon pressure, the persistent and circumscribed tympanitis, and the soluble state of the bowels, it was thought that the symptoms were owing to inflammation of the peritoneum covering the ovarian sac, of which the gastric symptoms were supposed to be symptomatic. Her general symptoms continued with little or no change; but the enlargement of the abdomen gradually increased, and some fluctuation could be detected at the lower part of it, while by far the largest portion was sonorous on percussion, and evidently filled with air. She was quite feeble, and gradually losing strength.

November 1.—She now passed under the care of Dr. J. M. Smith, but continued to sink, and died on the 13th of November.

Autopsy, twelve hours after death.—The ovarian cyst was found to be very large, and to be single, and was connected with the right ovary; it was slightly adherent upon its anterior surface, and not at all adherent posteriorly; the adhesions were recent, and easily broken down; it was tympanitic anteriorly, and there was no gas in the abdomen. Upon opening the sac, a considerable quantity of gas escaped; a quantity of yellowish, purulent matter was drawn off, about equal to that removed by the operation; the inside of the sac was lined with a thick layer of false membrane, of recent origin, which could be easily peeled off.

The abdominal cavity was entirely free from any evidences of peritoneal inflammation; lumbricoides were found in the intestines, but there was but slight evidence of inflammation of the mucous membrane of the stomach or bowels; the liver was healthy.

The fact that there was but a single cyst, and that this was almost entirely free from adhesions, would seem to confirm the opinion expressed by Dr. Atlee at the time of the withdrawal of the fluid, that it would have been a favorable case for its removal by the knife, if there had been any interval in which the patient was in a proper condition for the operation before the lining membrane of the sac took on a pyogenic character.

In connection with the diagnosis of the character of dropsical enlargement of the abdomen, derived from complete dullness over the umbilical region, with partial clearness over the iliac regions, which is laid down by writers, and generally recognized as the leading physical sign which distinguishes ovarian enlargement from a collection of water in the abdominal cavity, I would remark, that this sign failed in

a case of ascites, in a woman thirty years of age, who entered the hospital in October. In this case, the usual sonoriety on the umbilical region was wanting, the percussion being dull over that part, and slightly clear over the iliac regions. All doubt of the nature of this case was removed by the tapping which was performed, and by the subsequent progress of the case.

Diabetes.—Two cases of diabetes were under treatment—one of diabetus insipidus, and one of diabetes mellitus—the former worthy of record from its rare occurrence in an adult, and the second from the trial of a new remedial agent. The case of diabetes insipidus occurred in a female, æt. 21 years; a factory girl; of rather slender frame; of a strumous diathesis; with dark brown hair, and a florid complexion, who was admitted into the hospital May 19, 1856. She stated that she had been healthy up to the time of her attack, and knew of no cause for it. The room in which she worked was kept very warm, and she was accustomed to expose herself to all kinds of inclement weather, without being warmly clad, or keeping her feet dry. About a year before her entrance into the hospital, she was compelled by circumstances to retain her urine for some time, with distention of her bladder, and a strong desire to relieve herself. She suffered severe pain in the back at the time, which was relieved by the discharge of a considerable quantity of urine, and has not been troubled with it since. After this, she noticed that she had to urinate frequently, and that the quantity passed was large, although but little was passed at a time. Pain was felt on urinating, which continued afterwards, but not so severe. A slight degree of this pain is now constantly felt, and is increased when urinating or moving about. It is confined to the urethra, and its neighborhood in the vagina, and is sharp and cutting in its character. The quantity of urine passed, according to her estimate, would amount to about one hundred and twenty ounces in twenty-four hours at various times, the average being about one hundred ounces.

She was quite fleshy before the attack, but has since lost both flesh and strength; appetite has been good, but never immoderate; thirst has been excessive; she has suffered from no dyspeptic symptoms; she has paid no particular attention to diet, but has frequently restricted herself in the use of liquids, but without any effect upon the amount of urinary discharge; her bowels have been somewhat constipated, having usually had a passage every two or three days; her menses are regular as to time, but scanty in quantity.

No member of her family is known to have suffered from a similar affection. Her father is healthy; her mother died of phthisis; and she has lost one sister from acute hydrocephalus. She has never had a cough; her general health is now fair, and she complains of nothing but debility, and the discharge of an immoderate quantity of urine, which is passed frequently, and which compels her to rise often at night. The urine is of a light straw color, without any particular odor; no sugar can be detected in it, either by Trommer's test, or by that of yeast, or of liquor potassæ; the specific gravity is 1003; the skin is cool but not dry, and she complains of cold hands and feet.

The treatment was commenced May 23, when she was passing one hundred and thirty ounces of urine in twenty-four hours, of the specific gravity of 1008, when she was ordered tinct. mur. ferri, five drops three times a day. The quantity of urine varied during the remainder of the month from one hundred and thirty to one hundred and forty-six ounces in twenty-four hours, falling on one day down to one hundred and twelve ounces.

On 1st of June, the use of cod-liver oil was commenced, in doses of a table-spoonful three times a day, after which she began gradually to improve in both flesh and strength, and had also less pain in urinating. The quantity of urine during the month of June ranged from one hundred and eleven ounces (the smallest quantity passed) to one hundred and forty-five ounces in twenty-four hours, which it reached but once, but frequently reaching one hundred and thirty ounces, and several times one hundred and thirty-five ounces. When she came under my care, on the 1st of July, the quantity noted was one hundred and ten ounces, which was also the same on the following day, when the specific gravity was 1007.

On the 10th of July, when the quantity was one hundred and eighteen ounces, she was directed to take five drops of spirits of turpentine three times a day. The quantity of urine noted on the 11th was one hundred and thirty ounces, on the 12th one hundred and twenty ounces, when she was directed to increase the quantity of spirits of turpentine to ten drops, four times a day. From this time there was a diminution in the quantity passed, which, during the remainder of the month, ranged from one hundred to one hundred and ten ounces, on one day falling to ninety-four ounces, and another day to ninety-five. The cod-liver oil was continued regularly during this time, and both the health and spirits of the patient were decidedly improved, and on the 6th of August, she left the hospital, much relieved.

The case of diabetes mellitus was in a man, æt. 29 years; a carpenter by trade; native of Massachusetts; who entered the hospital June 11, 1856. He traced his disease four years back to an attack of typhoid pneumonia, the only symptom which he observed at that time being an increase in the quantity of urine passed, which he estimated to be at least two gallons in twenty-four hours. Soon after this he became costive; had an inordinate appetite and thirst. Six months afterwards, he put himself under the care of a homœopathic physician, and was treated two months by him without benefit. He then consulted a regular practitioner, and was put upon the use of creasote, tincture of iron, and a meat diet, with considerable improvement.

When he entered the hospital, he was reduced in flesh and strength; pulse was feeble; tongue coated; appetite good; thirst considerable; skin cool, but not dry; he had diminished vision of the left eye; he was passing one hundred and four ounces of urine in twenty-four hours, of specific gravity 1040, containing an abundance of sugar, and presenting the characteristic appearance of diabetic urine. He was

first directed to take Dover's powder three times a day, and to confine himself to animal food.

On the 23rd of June, he was put on the use of phosphate of iron, the quantity of urine having fallen in one day since his admission to sixty ounces, and another day to sixty-four ounces, being ninety-six the last twenty-four hours.

July 3.—The quantity passed on the 1st inst, was seventy-two ounces, of specific gravity 1042; and yesterday and to-day, fifty-six ounces each. He was now directed to take benzoic acid, in doses of five grains, three times a day, according to following ℞ acid. benzoic. grain XL. syr. tolu ʒi ♏. two tea-spoonfuls.

July 15.—The quantity of urine on the 4th rose from fifty-six to seventy-four ounces, and on the 6th reached one hundred and sixteen ounces, and ranged from seventy-two to ninety-six ounces, until the 14th, when one hundred and twenty-eight were noted—the specific grain being 1035 on the 10th, when eighty-six ounces was passed; and 1040 on the 12th, when ninety-eight were passed. To-day a copious diarrhœa has come on, and no sugar was discerned in the urine by Trommer's test, while it was found by the yeast test.

July 19.—Diarrhœa still continues; quantity of urine, sixty-four ounces. The benzoic acid was still continued; directed to take Dover's powder.

July 20.—The diarrhœa persisting, the benzoic acid was discontinued, and he was directed to take one grain of opium every two hours.

July 23.—Diarrhœa checked. Passed eighteen ounces of urine yesterday, and has passed only sixteen ounces the last twenty-four hours, of specific gravity 1020; and *no sugar was detected in it* by either Trommer's test or yeast.

July 24.—Has passed twenty ounces to-day; has had no passage from bowels since day before yesterday. Directed to discontinue the opium, and to resume the benzoic acid as before.

July 28.—Although he has had eight or ten discharges from his bowels to-day, he has passed one hundred and twenty ounces of water, of specific gravity of 1027, containing an abundant quantity of sugar.

July 29.—Diarrhœa stopped spontaneously. Passed one hundred ounces.

August 4.—Passed one hundred and thirty-two ounces on 1st inst.; one hundred and twenty-four on second, and one hundred and twenty-eight on third; and to-day has passed one hundred and forty-eight, specific gravity 1032; has no diarrhœa; perspires somewhat, but has considerable thirst; says that he feels more comfortable than he did.

August 5.—Condition about same; bowels in good order; passes one hundred and eighty ounces of urine in twenty-four hours; still takes the benzoic acid regularly.

August 8.—Has some diarrhœa to-day; quantity of urine seventy-two ounces; directed to take pulv. Dover.

August 9.—Diarrhœa checked. Passes ninety-six ounces.

August 13.—Quantity of urine rose to one hundred and twenty-

four ounces on 10th; some diarrhœa to-day; passed eighty-four ounces yesterday, and the same quantity to-day.

August 20.—Has passed from ninety-six to one hundred and thirty-eight ounces since last date; bowels now regular; passed one hundred and fourteen ounces the last twenty-four hours. Benzoic acid still continued.

September 1.—Since last date, quantity of urine has fallen as low as forty-eight ounces in twenty-four hours in one instance, another day to sixty-four ounces, and rose as high as one hundred and four ounces yesterday; quantity last twenty-four hours was one hundred and twelve ounces. Ordered—tinct. mur. ferri, ten drops, three times a day.

September 6.—Abundance of sugar in urine; passes one hundred and forty-six ounces. Ordered—pil. opii.

September 16.—Bowels have been somewhat loose, and he has been kept under the use of opium; had but one passage yesterday; pulse 96, of good strength; quantity of urine has varied since last date from eighty-six, as the lowest quantity, to one hundred and fifty-two ounces as the highest; now passes ninety-six ounces, specific gravity 1037; he was now directed to take ten grains of benzoic acid, three times a day, and also to continue the opium.

September 19.—Directed to take cod-liver oil, a table-spoonful three times a day.

October 1.—Remains without change. Quantity of urine has varied between the two extremes of ninety and one hundred and eighty ounces, having reached the latter amount yesterday. Quantity passed last twenty-four hours, one hundred and fourteen ounces.

October 22.—Has continued without particular change, the urine in one instance having fallen as low as one hundred and eight ounces, and twice reached one hundred and seventy-six ounces; had a diarrhœa last night, with watery stools, preceded by pain; and the quantity of urine was reduced to forty-eight ounces, specific gravity 1039; the appetite is now good, and the thirst more moderate than at first.

October 31.—Has been taking ten grains of benzoic acid three times a day, since it was last ordered, and a table-spoonful of cod-liver oil, three times daily, since September 10th. The quantity of urine passed on the 23rd, was eighty-four ounces, on the 24th, eighty ounces; 25th, ninety ounces; 26th, ninety-six; and on 27th, eighty ounces; although there had been no stool since the 25th; on the 28th, it rose to one hundred and twenty ounces; and on the 29th, to one hundred and forty ounces; and to-day is one hundred and fourteen ounces.

The diet during the month of July was farina boiled with milk, and crackers; and during the months of September and October, mutton-chops for dinner, with bread and crackers, and milk twice a day. The thirst varied on different days, sometimes owing to a diarrhœa, and sometimes without any appreciable cause. The quantity of fluids varied with the thirst usually, although for some time he abstained from gratifying it, but thought that he passed more water when he did so than when he indulged his desire to drink. No record of the amount

of fluid taken from day to day was kept, but he estimates the average quantity to have been about four quarts during the four months, from July to October inclusive.

It will be noticed as a striking feature in the case, that on the 23rd of July, after having taken benzoic acid for seventeen days, and on the third day after its use was temporarily discontinued, and while he was taking a grain of opium every two hours to check a diarrhœa which had supervened several days previous, which diarrhœa had on that day been checked, he only passed sixteen ounces of urine during the twenty-four hours, of the specific gravity of 1020; and that *no sugar could be detected* in it by either Trommer's test or yeast, although the experiment was carefully repeated by the same gentleman who had been in the habit of testing it, and had always found sugar on former trials. On the preceding day, the quantity passed only reached eighteen ounces. It will be remembered that on the day of his admission, he had passed one hundred and four ounces in twenty-four hours, of the specific gravity of 1040; on the 10th of July, sugar was found by the yeast test, but not by that of Trommer.*

The use of benzoic acid in this case was suggested by its effects in a case reported by Dr. Rand, in the *Quarterly Summary of the Transactions of the College of Physicians of Philadelphia*, vol. 2, number 8, from March 7, to April 4, 1855, in which the disappearance of sugar in the urine, soon after its administration, on five different occasions, would seem, as the author remarks, to establish a relation of cause and effect. The benzoic acid in that case was given in pill, in doses of ten grains, three times a day. The patient had remained a year without any traces of the disease. In that case, however, the disease was brought about by the indulgence of the appetite for fruit and farinaceous diet, while the patient could eat candy without any such result. A peculiarity in Dr. Rand's case was that the sugar disappeared almost immediately after commencing the use of the acid, sometimes the next day. Dr. W. M. Uhler, who suggested the use of the remedy, assumes "that the cure is effected by the benzoic acid converting glucose into lactic acid, which is broken up and respired instead of passing off through the kidneys." This explanation assumes, as Dr. Rand remarks, the grape sugar to be the cause of the disease, and not the effect, and agrees with that view of the pathology of the disease which makes the fault in the lungs, which do not consume the

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* This patient is still in the Hospital (February 23); and according to the record kept, the quantity of urine ranged nearly as high as two hundred ounces daily, during the month of January, exceeding that amount on nine days, and reaching on one day as high as two hundred and seventy ounces in twenty-four hours. Thus far in February, it has ranged from one hundred and sixty to three hundred and forty ounces, having reached the latter figure the last twenty-four hours. He has emaciated since October, and also lost strength. He has been living on meat and potatoes, and soup, and bread and tea, during a few weeks past. He now suffers considerably from thirst, and drinks about six quarts daily. He was without any special treatment during the month of January; and since then, has been under the use of yeast. He still continues to take the cod-liver oil.

sugar found in the liver. Our limits will not allow us more space for remarks on this interesting but obscure subject, but we will close our report with a single brief case.

Tænia Expulsion by Pumpkin Seeds.—A German sailor, twenty-two years of age, who had discharged a part of a tape-worm a year previous, and who had been continually passing portions of it since that time, was admitted into the hospital, July 15. He experienced no inconvenience, except when he took certain articles, as vinegar, salt, etc., when he had a severe pain in the epigastric region. He had had a craving appetite at times, but had never suffered from itching about the anus or the nose, and had not lost flesh. His bowels were regular, tongue clean, etc., and he appeared like one in good health. He was first ordered a dose of castor oil, which brought away several small joints of the worm. On the 22nd of July, after having been kept from food nearly twenty-four hours, he took the following emulsion at one draught :—℞ Pulv. pep. cucumb. ʒij., sach. alb. ʒj., aqu. bul. oss. ♏—and two hours afterwards, ol. ricini. ʒi.

On the afternoon of the same day, he passed six feet of tape-worm, which lived about three hours. The same emulsion was repeated a few days afterwards, but without bringing away any more of the worm; and two days afterwards he left the hospital. We have to regret that, owing to the accidental loss of the worm, we were disappointed in an intended microscopical examination, for the purpose of learning whether the head was discharged.

BELLEVUE HOSPITAL.

Cases of Perforation of the Pulmonary Pleura, with Remarks. By D. D. Saunders, M.D., and John C. Draper, M.D., of Bellevue Hospital, New York.

Case 1.—*Phthisis, followed by Hydro-Pneumothorax—Injection of Chlorine Water into the Pleural Cavity.*—Catharine Hays, single; æt. 29; native of Ireland; a domestic by occupation. Admitted to Bellevue Hospital, November 24, 1856; intemperate in her habits; has had syphilis; her mother died of fever; brothers and sisters living and healthy. Catamenia commenced at sixteen years of age, and she has been regular ever since. Had a child two years ago; had rheumatism eighteen months since; otherwise she has enjoyed good health, until two months ago, when she began to cough and expectorate a frothy material. Soon after these symptoms commenced, she began to experience a smothering sensation in her right chest, attended occasionally by a sharp pain in taking a full inspiration or coughing.

When admitted, she had a cough with purulent expectoration, a pulse of 92 beats per minute, and respiration 34. Physical examination revealed tubercular deposits at the apices of both lungs, and a cavity at the inferior angle of right scapula; respiratory murmur heard at the base of right lung.

On the evening of November 27, there was tympanitic resonance

over the whole of right chest; amphoric respiration and cough posteriorly, indicating pneumothorax.

November 28.—Pulse 120 beats per minute; respiration 36. Ordered—half a dozen wet and a dozen dry cups to chest, which was followed by considerable relief. On succussion, the clear splashing sound was developed. Heart's apex displaced two inches to left of left nipple, the respiratory murmur being still heard at base of right lung.

November 29.—Pulse 122 per minute; respiration 43. On the evening of this day, the dyspnœa became much worse, and the hands cool. Ordered—half a dozen wet and a dozen dry cups to be applied, opiates and Hoffman's anodyne.

November 30.—Three A.M.—Was called to the patient in great haste, and found her bathed in cold perspiration, with a dusky countenance, livid lips, cold hands and feet; pulse thready, rapid, and imperceptible; respiration 56 per minute, and very labored.

Paracentesis thoracis was immediately performed with a small trocar and canula, in the sixth intercostal space, two inches to the right of a line drawn perpendicularly through the right nipple, the liver having been depressed by the air in the pleura.

The moment the trocar was withdrawn, there issued a considerable amount of fœtid air, and about a pint of decomposing sero-purulent fluid. A few minutes after the operation was performed, and a bent probe introduced to keep the incision open, the warmth returned to her hands and feet, the color to her lips, the perspiration ceased, the respiration became tranquil; and after administering ʒiij of wine, she went to sleep, and rested well for several hours.

Half-past ten A.M.—Pulse 108, full and strong; respiration 30, easy and natural; appetite good; respiratory murmur heard in nearly the whole of right lung, except at inferior angle of scapula, where it is amphoric; heart's apex in its normal position; there is some fluid still discharging from the opening. Ordered—quinine, gentian, sol. sodæ chloratis, wine, and opiates.

December 2.—Patient comfortable; appetite good. As the discharge was very fœtid, threw injections of chlorine water, ʒij, into the pleural cavity through the canula, which acted most favorably in dispelling the fœtor, and at the same time producing no dyspnœa or irritation of the bronchial tubes. These injections were continued with great relief until December 5, when the materials for generating the chlorine gave out. Diarrhœa set in on this day, and all efforts to check it were ineffectual. She died December 7, nine days after the perforation, and seven days after the operation.

Sectio cadavaris, thirty-six hours post mortem.—Rigor mortis well marked. Cranial cavity not examined. Thoracic cavity—on opening this cavity, the whole of right pleura was found bathed in pus, which was very fœtid; a perforation about a quarter of an inch in diameter existed at the point where the cavity was diagnosticated; the cavity itself was about the size of a hen's egg; another spot, an inch from the perforation and half an inch in diameter, was very thin; through the superior part of right lung there were deposits of tubercle. The

left lung contained a deposit of tubercle at its apex. Abdominal cavity—liver fatty, with some little inflammation of its peritoneal covering; kidneys were somewhat fatty. The other organs were healthy.

Remarks.—A few points of interest are presented by this case:—

1. The fluid was noticed in the cavity of the pleura, twenty-four hours after the detection of the pneumothorax.

2. The pneumothorax was not ushered in by any sudden increase of pain or dyspnœa, though the displacement of the heart indicated the presence of a great amount of air in the right pleural cavity.

3. The influence of the operation in prolonging her life for several days, for death would most certainly have taken place in a few hours, had it not been performed.

4. The opening, through which the trocar passed was left open, in order that the fluid might not reaccumulate.

5. The admirable antiseptic properties of the chlorine water, and its non-irritating effects in this case, though we know it to be a most powerful irritant to the bronchial tubes when inhaled.

Case 2.—*Phthisis and Pneumothorax.*—Sarah Robinson, single, æt. 20 years; admitted to Bellevue Hospital September 9, 1856; a woman of the town, of intemperate habits; has had syphilis; her father died of phthisis. She had been suffering about a year from cough and gradual loss of health, and when admitted, was sent to the surgical side of the house for an ulcer of the leg, where she remained until October 20; she was then transferred to the medical side. When examined, physically, there was found tubercular deposits at the apices of both lungs in the softening stage. Although confined to bed, she was pretty comfortable until the night of November 12, when she was suddenly seized with pain in the left side and great dyspnœa.

When seen the following morning, she was lying on her right side, with the body and head flexed forward; there was an anxious expression of countenance, cold hands and feet, great dyspnœa, and intense pain in taking a full inspiration or coughing. Respirations were 35 per minute, and labored, with an almost imperceptible pulse of 130 beats per minute.

Physical Examination.—Inspection.—Almost total loss of respiratory motion on left side of chest, with bulging of intercostal spaces. Heart dislocated to the right of median line.

Percussion.—Tympanitic resonance over the whole of left chest; on the right side the percussion was normal, the dullness at the apex having disappeared.

Auscultation.—On left side total loss of respiratory murmur; amphoric cough and voice sounds posteriorly; no other signs on that side. On right side, there was puerile respiration and prolonged expiratory murmur. Heart sounds heard in the median line and to the right; they were distant and indistinct.

Diagnosis.—Pneumothorax supervening on tubercles.

Treatment.—Opium to relieve pain, stimulants, and counter-irritation.

She gradually grew worse, and died November 14, 1856, fifty hours

after the perforation took place. There were no signs of effusion of fluid before death.

Sectio cadavaris, seventy-two hours post mortem.—No rigor mortis; cadaver emaciated. Cranial cavity not examined. Thoracic cavity—the left lung was completely collapsed, the pleural cavity contained only air; the heart was lying a little to the right of the median line; the pericardium contained about ℥ij of fluid; there were deposits of tubercle at the apices of both lungs, though to a greater amount in the left; in order to determine the point of perforation, the left pleural cavity was filled with water, air was then forced through the trachea and began to bubble through the water from a small opening in the pulmonary pleura, situated in the anterior surface about midway between the apex and base, and an inch from the right border of the lung; the cavity, through the walls of which the perforation took place, was about the size of a marble, and the perforation was about the size of a pepper-corn. Abdominal cavity—liver of natural size, but fatty; kidneys enlarged and fatty; omentum contained a good quantity of fat; other organs healthy.

Remarks.—The only point worthy of special notice in this case, is that the pneumothorax existed for fifty hours before death, and no fluid was effused into the cavity.

Case 3.—*Phthisis and Pneumothorax.*—Frank Holmes, æt. 22; Irish laborer; admitted July 3, 1856. Mother and two brothers died of phthisis. Had never been very strong, though he enjoyed pretty good health up to three months ago, when he noticed a cough troubled him a little in the morning on first awaking, which was attended by muco-purulent expectoration. On exertion he would be troubled with dyspnœa, and sometimes palpitation; never recollected having had any sudden attack of sharp pain in his chest, or severe dyspnœa; had never had hæmoptysis or diarrhœa, but had been troubled with night sweats.

When first seen after admission, he had a pulse of 108, and respiration 30 in the minute, but without any great effort. There was very little motion of the right side, and it was much larger than the left, that the intercostal spaces were bulged out; there was no œdema of the lower extremities.

Palpitation.—The vibratory thrill was extinct on the right side; the heart's apex could be felt striking an inch to the left of left nipple.

Percussion.—Was tympanitic over the whole of right chest; there was some dullness at the apex of left lung.

Auscultation.—Amphoric respiration, cough, and voice, over the whole of right lung; puerile respiration over left lung, with prolonged expiration at the apex; there were no signs of effusion into the pleural cavity during life, though he lived five weeks after the pneumothorax was discovered.

Diagnosis.—Pneumothorax supervening on phthisis.

Treatment.—Was palliative, with good diet, wine and tonics. He remained some six weeks in the hospital, when diarrhœa set in and carried him off August 12, 1856.

Sectio cadaveris, thirty-six hours post mortem.—Cadaver emaciated;

no rigor mortis. Cranial cavity not examined. Thoracic cavity—there was deposit of tubercle at the apices of both lungs, with a cavity the size of a walnut in the apex of right lung, in the walls of which there was a perforation the size of a buck-shot; quite a quantity of air issued from the right pleural cavity when it was opened; there were no signs of serous effusion into either pleura; the heart was found lying on the left of the median line, and was healthy. Abdominal cavity—liver and kidneys fatty; the large intestines were full of patches of tubercular ulceration; small intestine and other organs healthy.

Remarks.—The main point of interest in this case, is the period of time through which the pneumothorax existed without the air causing sufficient irritation to bring about the effusion of serum into the pleural cavity. It resembles the first case, in the fact that the perforation took place without any severe attack of pain or urgent dyspnœa; and as in the first case so in this, the dyspnœa, though at first slight, yet, toward the last became very distressing.

Phthisis and Death by Pulmonary Hæmorrhage in an Infant, aged three months, with Remarks. By Bolling A. Pope, M.D., House Surgeon to Bellevue Hospital.

C. H., born in Bellevue Hospital. The mother who is a native of Ireland, was treated during the last three months of pregnancy, in the first surgical division of the hospital, for ulcers of the cornea, and scrofulous disease of the bones of the arm. Two weeks after confinement, mother and child were sent to the surgical ward; the mother being still troubled with the above mentioned diseases. Upon a close examination of her case, to which attention was called by the cause of death in her child, I found that there was considerable deposit of tubercle in the upper part of the right lung; from which she has suffered no notable inconvenience, never having had hæmoptysis or other symptoms of phthisis, except shortness of breath upon over exertion. There was an abundant secretion of milk, and no emaciation.

The child was two weeks old at the time it came under my care, and seemed well nourished, and was of good size; skin quite fair and rather pale; eyes light blue; the child on the whole giving the impression of delicacy, though no obvious disease existed. A few days after it was attacked by a mild form of conjunctivitis, which was easily relieved.

About two weeks after its transfer, it had a slight attack of what seemed to be bronchitis, but soon apparently recovered, with the exception of a little cough now and then, which seemed to give it pain, and was followed by crying. Six weeks before death, it had another attack of bronchitis, which was also soon relieved. Another attack occurred four weeks before death; each attack being accompanied by more serious interference with respiration, which became quite rapid; with anxious countenance; no marked heat of skin, or notable interference with æration of the blood. Cough continued with some dyspnœa, until about two weeks before death, when there was another attack of bronchitis, with rapid pulse and respiration, troublesome cough, and paleness without marked heat of surface; sensibility was much increased

so that it started upon the slightest touch. The treatment during the attacks consisted in counter irritation, and an oiled silk jacket to the chest; small doses of Dover's powders, or of tincture of sanguinaria, and camphorated tincture of opium. The bowels were gently moved, now and then, by powders composed of mercury, with chalk, rhubarb, and bicarbonate of soda; the alvine discharges were unhealthy.

January 18.—Eight days before death, roseola appeared on the face and extremities.

January 20.—The eruption has entirely faded; cough continues troublesome, and respiration rapid. Physical examination showed nothing satisfactory except the absence of bronchitis.

January 22.—Better.

January 24.—Has been growing gradually worse since the 22nd. The pulse and respiration, especially the latter, very frequent; the countenance anxious, and eyes staring, with slight duskiness under the eyes. The child was allowed to breathe the vapor of tincture of opium for an hour, and at the end of that time was somewhat under its influence; the respiration having fallen from seventy-two to fifty-four, and the pulse from about 160 to 144. After two hours it slept quietly; the respiration at 48, and the pulse 140.

January 26, A.M.—Better. Nine P.M., called in haste and found the mouth and nose filled with clotted blood, and a small quantity flowing from the nose; about five ounces had been caught in a basin. It breathed for about a minute after I saw it; making not more than five minutes from the time the hæmoptysis commenced. It was nursing at the time of the hæmorrhage, and, upon giving a light cough, the bleeding began. There was some flow of blood from the mouth, after death; probably two ounces.

Autopsy, forty-eight hours after death.—Rigor mortis well marked; body pale, with some congestion of depending part of trunk. Cranial cavity—brain normal; venous sinuses empty, and but little blood in superficial vessels; no puncta on section. Thoracic cavity—heart and pericardium normal. Lungs—miliary tubercles found throughout both lungs; most marked in both, about the roots and posteriorly; the right lung was most involved, especially the lower lobe posteriorly and towards its upper part. About the first and second bifurcations of right bronchus, there seemed to be a dilatation, containing a small soft clot, which at first led to the suspicion of a cavity, though upon close examination, none was found. There was no evidence of inflammation in either lung; nor was there softened tubercle or a cavity found at any point. The larynx and trachea were both healthy and contained no blood. The bronchial tubes somewhat stained, but found none filled with blood. Under the right pleura costalis, there was a scattered deposit; none under the left. Abdominal cavity—the liver and spleen were both studded with tubercular deposit on their sub-peritoneal surface; the stomach healthy, and containing from one to two ounces of clotted blood; the remaining abdominal organs were healthy; no deposit in the glands of the mesentery; the tubercular matter was of a clear, rather glis-

tening white appearance, similar to boiled rice or barley; the intestines were very pale.

Remarks.—All are familiar with the rarity of this disease in infancy; though authors speak of its occasional occurrence in the lungs during fœtal life. The absence of tubercles in those organs where most usually found in infancy, the point of greatest deposit, and the general diffusion through the lungs, are obviously worthy of note.

Louis, in one hundred cases of phthisis before puberty, found but two cases in which hæmoptysis occurred.

Walshe says that in one hundred and thirty-one cases of death from phthisis, occurring under his observation, only two were by hæmoptysis; one was direct, but from asphyxia, not loss of blood. In the other, death occurred from exhaustion five days after the hæmorrhage.

The statistics of Bellevue Hospital furnish two hundred and fifty deaths from phthisis in the last twelve months, and of these two were caused by hæmoptysis, besides the present case. These two hundred and fifty cases were adults; the two deaths by hæmorrhage were in males, and the disease was in the third stage.

The two cases mentioned by Walshe also occurred in male adults. The amount and rapidity of hæmorrhage is not without interest. If we exclude the existence of a cavity, and the possibility of the hæmorrhage from the capillaries of the air cells, or of the common cellular tissue of the lungs, may not the fact that the deposit was situated at the roots of the lungs, where it would be most likely to interfere with the circulation of the bronchial mucous surface, the remaining source of hæmorrhage, throw some light upon the extraordinary termination of the case?

"Pulmonary hæmorrhage," says Walshe, "that is hæmorrhage springing from the *actual parenchyma*, occurs *with* or *without* recognized anatomical characters. In the first case, we meet with the nodular and the uncircumscribed pulmonary apoplexy of Laennec, petechial, and, lastly, interlobular hæmorrhage. No one of these anatomical states is *necessarily* productive of, or connected with, hæmoptysis; whereas, there is no established morbid anatomy of the most frequent variety of hæmoptysis, that depending on consumption.

"Molecular ruptures of the capillar yvessels of the parenchyma are doubtless the cause of the discharge of blood in tuberculous diseases, except in those infinitely rare cases where a vessel of some size is perforated; but absolute demonstration of the fact is still a desideratum."

In the above case, there was no evidence of extravasation into the parenchyma, which would seem a necessary consequence of a rupture of its proper capillaries. It would, of course, be difficult to estimate the exact period that the hæmorrhage occupied, the stomach, in all probability, having become full before any notice was given. The fact that the child was nursing at the time makes this more probable.

The good effects of the inhalation of the vapor of laudanum in procuring rest, and relief from cough, and its tendency to restore the pulse and respiration to their normal ratio are probably not without

interest. Three hours before, the child had taken a full dose of opium without much good effect.

The mother had been upon the use of cod-liver oil and tonics for the last three months of her pregnancy, and during the life of the child.

Case of Metastatic Abscess in the Posterior Part of the Orbit, Causing Protrusion of the Globe of the Eye and Loss of Vision—Evacuation of Pus—Subsequent Occurrence of Hip Joint Disease. By J. Smith Dodge, M.D., House Physician to Bellevue Hospital.—J. Fitzgerald; an Irishman; æt. 19; was admitted into Bellevue Hospital September 5, 1856, with the following symptoms:—dry, hot skin; frequent, irritable, but rather feeble pulse; tongue dry, with a whitish fur in the middle; great pain in the head, with a stupid expression of countenance; and slight internal strabismus of the left eye. The patient stated that ten days before, he had begun to have severe headache, affecting more particularly the back of the head, and increasing in severity to the date of admission. This headache was accompanied by great thirst and by constipation, but without heat of skin.

The dullness of mind cleared up in a day or two, and never returned; and about the same time a swelling appeared in the left parotid region. This proved an abscess and was soon opened; but others succeeded it in the neck, the malar region, and the temple, of the same side; and the external meatus discharged a little pus. While these abscesses were progressing, the left eye was noticed to be more prominent than its fellow, and it continued to protrude slowly for many weeks. The protrusion was accompanied by sleeplessness, emaciation, and gradual loss of vision in the eye affected, but without pain in the eye. The conjunctiva soon became œdematous, and remained so while the eye was prominent; and at a later period the lids became enormously swollen.

By the middle of October, vision was entirely gone from the left eye, but unimpaired in the right. By the 12th of the same month, the whole globe of the eye was without the orbit; the lids extremely swollen; the conjunctiva œdematous and protruding between the lids; vision entirely gone; no pain in the eye. Abscess of the orbit being suspected, an exploration was made at the outer and lower part of the orbit, but no pus was discovered. But on the 17th, Dr. Wood introduced the needle at the inner canthus, discovered matter, and, on opening freely, a large quantity escaped, (from one to two ounces,) permitting the eye to recede nearly to its normal position. Sensibility to light instantly returned, but no power of sight was ever regained. Matter continued to discharge for a week or two, and the opening then closed, the eye regaining entirely its natural appearance.

About the 1st of November he began to feel ill-defined pains in the left thigh, and great pain about the hip joint on moving the leg, which was habitually held closely adducted. No local applications controlled the pain, but it steadily increased and located itself definitely in the joint. The pains were augmented at night, and sleep was, for some time, only procured by large doses of morphia, or the use of

anæsthetics; towards the last, the pain became less severe, and natural rest was obtained. There was at no time any objective sign of inflammation at the joint.

From the first there was an obvious tendency to sink, and the appetite had constantly to be encouraged. Towards the end, he failed rapidly, and his emaciation was extreme. He died January 8, 1857.

Autopsy, thirty hours after death.—Lungs perfectly healthy; heart healthy; kidneys congested, cortical portion somewhat diminished, convoluted tubes filled with disintegrated epithelium. The walls of the orbit were perfectly normal, and nothing could be found to indicate the exact site of the abscess, but the adipose tissue immediately surrounding the optic nerve was very much condensed, and the nerve itself seemed compressed. The left hip joint was found to have been the seat of extensive disease; the head of the femur and the bones of the acetabulum were entirely laid bare, and so much corroded as to have lost their perfect shape. The cavity contained little or no pus. The brain was not examined.

ART. VIII.—*Abstract of the Proceedings of the Medical Societies of New York.*

NEW YORK PATHOLOGICAL SOCIETY.

REGULAR MEETING, DECEMBER, 24, 1856, DR. ISAACS, *Chairman.*

Reported by E. LEE JONES, M.D., *Secretary.*

Extra-Uterine Fœtation.—DR. FINNELL presented a beautiful instance of extra-uterine fœtation. Julia Munson, æt. 27; born in New York; a prostitute. On arriving in this city, about the 20th of September, 1856, she engaged rooms at a ladies' boarding-house, stating that she had recently been delivered of a dead-born female child, of full term; that the lochial discharge suddenly stopped, and was the cause of her pain and distress in the right side; also, that the nurse neglected to put on a bandage, which was customary after confinement. At this time she had the appearance of general good health, with the exception of the pain in the right pelvic region, which was very severe at times, for a few minutes.

On the morning of the 21st of December, 1856, she was seized with a violent pain in the stomach, attended with vomiting; in a few minutes she became extremely pale, and said that it seemed as though something was bursting inside of her. After suffering severely for about ten minutes, the abdomen began to enlarge, from the presence of fluid, as evinced by fluctuation. Her voice became feeble, and in a few minutes she expired.

The *autopsy* was made twenty-four hours after death. On opening the abdomen, a gush of blood followed the first incision, the viscera were hidden from sight by the coagula; about ten quarts of blood were removed from the abdomen and pelvis. In the right pelvic region a tumor was discovered of the size of a fœtal head, adherent to the viscera of the pelvis, having the appearance of an aneurismal sac; on its removal with the surrounding parts, it proved to be the fallopian

tube with organized fibrinous coagula; the outermost of these had burst, and the hæmorrhage probably came from a plexus of veins on its surface. The tumor being opened by a crucial incision, the liquor amnii escaped clear and limpid to the amount of four ounces; a fœtus of three and a half months development with the umbilical cord, six inches in length, inserted into the placenta at the bottom of the sac, composed the largest portion of the tumor; the uterus was enlarged, and contained the membrana decidua in a perfect condition.

Dr. Isaacs had examined for Dr. Purdy a woman, who was considered at the time of her decease, as three months advanced in utero-gestation; she died suddenly. On inspection, the abdomen was found filled with blood, which proceeded from a rupture of the fallopian tube; the fœtus had escaped, and could not be found.

Fibrous Tumor.—Dr. L. A. Sayre presented a tumor, fibrous in nature. He removed it from the forehead of a woman, æt. about 55 years, of perfectly good health; the whole surface of her body was thickly covered with small encysted tumors. The tumor was firmly adherent to the skin, which seemed to be closely blended with the substance of the mass; it was attached to the periosteum, which was to some considerable degree destroyed by absorption. From the same position as this growth, a tumor (encysted) of the same character as those now over the surface of her body, was removed some years since.

Enormous Aneurism of Innominata.—Dr. James R. Wood presented an instance of aneurism of innominata. He was indebted to Dr. George Lewis for the specimen; by whom the following detailed account of the case was prepared. The patient from whom this specimen was taken came under observation on the 28th day of May last, and from him I received the following history:—æt. 44 years; constitution good; habits temperate; he has been subject to occasional attacks of what he supposed to be rheumatism for the last five years.

For two years, at times, has been troubled with shortness of breath, and occasional pain under the sternum when walking rapidly or performing active exercise, which have increased for the last few months. He states that, on former occasions, when troubled with rheumatism, he has generally cured himself, but now has treated himself unsuccessfully for a period of three weeks. At present he complains of severe pains about the right shoulder; and the right hand is somewhat swelled and painful. A slight examination of the chest gives evidence of hypertrophy of the heart and insufficiency of the mitral valves. Supposing the heart affection to be rheumatic in its character, the alkaline treatment was prescribed without making a particular examination of the shoulder, and continued for a period of three days.

At the expiration of this time the pain and swelling in the hand had subsided, but continued without abatement in the shoulder. The obstinate persistence of pain in this locality led to the apprehension, that there might be something more serious than was anticipated; and a more critical examination was now made. The pain at this time was principally confined to the shoulder and outer extremity of the clavicle, both of which were painful on pressure; the clavicle was

raised by every pulsation of the heart. Above the clavicle in the right cervical region, an unnatural fullness and pulsation was observed, which could be traced below the sternum.

Auscultation discovered a well-marked aneurismal thrill under the clavicle and superior portion of the sternum, along the course of the arteria innominata. The strength of the impulse under the sternum, below the origin of the arteria innominata, extending to the right of the median line of the sternum, and downward toward the cardiac region, which resembled that communicated by the contraction of the heart against the thoracic walls, gave rise to the suspicion that the aorta was involved.

Repeated examinations confirmed this opinion, and I plainly stated to the patient my convictions with regard to the nature of his disease, and the impossibility of his recovery.

Dr. Willard Parker, now, at my request, saw the patient with me; also Dr. James R. Wood, both of whom confirmed the opinion previously expressed.

The treatment ordered was absolute rest, low diet, and sedatives to control undue action of the heart; also, some laxative pills to remove troublesome constipation.

During the month of July the pain was less troublesome, the action of the heart less irritable; and the general condition of the patient so comfortable, that for a period of two months he passed from under my observation, during which time I called three times at his residence, but was informed each time that he had gone to his business.

In the early part of October, I again saw the patient. A large, circumscribed, tense, pulsating tumor, now occupied the whole of the right cervical region, extending across the anterior portion of the neck, and pushing the larynx before it, which now could be felt at least one inch and a half to the left of the median line. The pulse was firm, rapid, and irritable; the pain about the shoulder, neck, and head intense.

From this time, the progress of the disease was gradual; the aneurismal sac enlarged in every direction. At times the pressure upon the larynx and pharynx was so great, as to cause troublesome dyspnœa and dysphagia. During the last three weeks of the patient's life, he complained of extreme restlessness; no position was comfortable; the pain in the head and neck continued with increased severity; there was numbness of the right arm, and weakness of the corresponding leg. The tumor steadily increased in size until its prominence in front was even with the chin, and extended until it occupied the entire left cervical region, carrying the larynx before it, which could now be felt in the left cervical region, and in a line with the angle of the lower jaw. At no time during the history of this case, was there complete aphonia. During the last week of the patient's life, dyspnœa was so great that he would frequently request his attendants to open the doors and windows; dysphagia during the last four days of his life was complete, in consequence of which enemas of beef tea were administered.

Early in the month of December, the integuments covering the tumor, which until then had been natural in appearance, began to as-

sume a dark livid hue at its most anterior and superior portion, extending over the entire summit of the tumor.

The measurement of the tumor, taken three days before the death of the patient, from its base in the right cervical region transversely across its most prominent portion to its base in the left cervical region, was thirteen inches. The measurement of the neck, including the tumor, was twenty-one inches. Diagonally from the middle of the left clavicle to the base of the tumor in the right cervical region, it was eleven inches.

On the first day of December, while sitting quietly in his chair, the integuments gave way at its anterior superior portion, and the patient died from loss of blood.

Ovarian Tumor, containing Hair and Teeth—Death by Strangulation of the Intestines.—Dr. D. S. Conant presented an ovarian tumor removed from a Negro woman, 35 years of age, who died on the 27th ultimo, four days after her admittance into the Colored Home, of this city. The tumor contained in one of its divisions hair and a number of teeth. The immediate cause of death was strangulation of the intestines. She had observed the tumor some ten years ago for the first time; since then it had continually increased in size up to her admission to the hospital, when she had much the appearance of a woman in the ninth month of utero-gestation; she was much emaciated with irritable stomach and almost no desire for food; pulse quick and feeble; she said she had had no passage from the bowels for nearly two weeks; all medicine given by the mouth were immediately rejected by the stomach, when stimulating enemata were resorted to with no effect; she died on the third day.

The autopsy was made by M. E Thrasher who is at present remaining at the Home, and by whose kindness I am able to present the tumor to night; the main tumor was bounded in front by the abdominal walls to which it was firmly attached, posteriorly by the small intestines, cœcum, and ascending colon; the superior and left lateral border were attached to the transverse and descending colon; the sigmoid flexure and rectum not being involved; the omentum was either implicated in, or destroyed by, the pressure of the tumor; there was an infinite number of small tumors from the size of a small pea to a hen's egg, in the areolar tissue around the tumor, and also around the liver; these contained nothing but a viscid semi-fluid matter; the main tumor is from the left ovary, and divided into three compartments, developed from a multilocular mass about the size of a quart bowl; each of the compartments contained about a quart of thick lardaceous matter mixed with hair, similar to the hair mixed in mortar used for plastering; this hair is perfectly developed with a follicle like ordinary hair, and grows from the inner surface of parietes of the tumors; these three compartments of the large tumor communicate by small round openings about an inch and a half in diameter. These tumors, in being developed from the base, had enclosed a knuckle of the ileum, about four inches from the cœcum, and had, finally, entirely obstructed the passage through this portion of the canal, so that after the parts were removed air could not be blown through; projecting

from the multilocular mass above mentioned into one of the compartments of the large tumor were two processes of bony material, into which were irregularly inserted twenty-three teeth, composed of all the different varieties of teeth found in the adult jaw; there was also one small piece of cartilage shaped like a small humerus about one inch and a half long. The cells of the multilocular mass contained a thick viscid fluid, peculiar to such tumors. The left ovary contained about a half pint of the lardaceous matter mixed with hair; and there were several smaller tumors which had no connection with either of the previous, except by areolar tissue, which contained the same as the large ones, one the size of a hen's egg, lined by a crustaceous deposit from which the hair can be seen projecting inwardly, depends from the larger one posteriorly. In the multilocular mass were found three or four small irregular (bony) masses which had no connection with the larger pieces of bone.

Ovarian Tumor—Successful Removal.—Dr. Peaslee presented an ovarian tumor which he had successfully removed a few months since, on the 27th of October, 1856; she being again quite well. He observed that Cruveilhier has divided ovarian tumors into the unilocular, the multilocular, and the areolar. This is principally of the areolar variety, though there are also several sacs superadded to the areolar portion. Cruveilhier has admitted in a recent speech in the French Academy of Medicine, that no remedial measures were of any avail in cases of this variety of tumor, and yet said that the operation of removal of the tumor is not to be cited at all. Dr. Peaslee, however, disagreed with this high authority on this particular subject. For, as Mr. Cazeau has remarked, about two-thirds of those already operated on have been saved, notwithstanding the errors in diagnosis, and the other blunders consequent on the early attempt in a new operative procedure, and which experience is daily in some degree correcting. It should be remembered that in this variety of ovarian tumor the operation is the *only* thing to be thought of since the tumor is utterly incurable, as all are agreed in deciding; and that death is inevitable, if the patient is left to herself, within four or five years at the longest, after the appearance of the disease, in almost every case.

Recently, however, M. Boinet had called the attention of the French Academy to a method of cure in the other two varieties of ovarian tumors, which might in many cases succeed without a resort to the operation of ovariotomy. This consisted in the injection into the ovarian sac of about three ounces of the tincture of iodine—the same quantity being used whether the sac be very large or small. M. Boinet had cured thirty-one cases out of forty-five operated upon, from 1847 to 1856. He adopts a method not necessary to be explained here, by which the fluid injected is passed directly into the sac, then if possible brought into contact with its whole internal surface, and finally entirely withdrawn again, without any portion of it falling into the peritoneal cavity. No grave symptoms have ever followed his operations; and whenever they have followed those of others, it is, he asserts, because the tincture of iodine is allowed to enter the peritoneal cavity. Dr. Peaslee believed M. Boinet had done a great service to practical

medicine, and expressed a hope that the profession would not be slow in appreciating his merits. In the case under consideration, Dr. P. remarked that he had diagnosed an areolar tumor, and that it was confined by adhesions at its lower portions. It had by its downward pressure produced a prolapsus, and in fact, a complete protrusion through the vulva of the uterus and bladder, and this caused constant irritation and distress. The operation proved the correctness of the diagnosis; there being three bands confining the tumor, each about the thickness of two fingers. One of them was on the right side of the tumor (the left ovary being the diseased one), and two on the left. Finding it impossible to make any impression upon either of them by his attempts to rupture them, Dr. Peaslee passed a double ligature through the middle of each of them, and after enclosing each half in one of its portions, divided them. The pedicle was then also divided, after being also ligated in the same way. Thus eight ligatures remained; the last of which came off in six weeks. The patient had no bad symptoms after the operation.

The tumor presented a singular depression on its anterior face (it weighed ten pounds when first removed), bounded by a sharp firm edge, like an aponeurosis. This jutting edge led him while exploring the tumor through the first small incision, to believe it to be merely a strong band attaching the tumor to the abdominal peritoneum; and in attempting to detach it from the tumor he ruptured a vein in the substance of the latter, from which most of the blood lost in the operation proceeded. The hæmorrhage occurring, at once showed the edge not to belong to an adventitious formation, and the actual state of things was then at once detected.

Dr. James R. Wood remarked that he was always glad to have the subject of the removal of ovarian tumors recur. He referred to the want of success of the operations of Dr. Mott, Dr. Van Buren, and others, in this city, amounting to eight or ten operations in all, and still hesitates to advise its performance in any case. Dr. David L. Rogers had operated in two cases, one was successful; the other fatal in forty-eight hours, which he believes never was recorded. Dr. Valentine Mott, in two cases, operated unsuccessfully. Dr. Kissam removed an ovarian cyst, the patient died in a few hours. In Dr. William H. Van Buren's two operations, one was favorable, the other fatal. In one case operated upon by Dr. Willard Parker, the patient recovered; in another, the attempt was made to remove the tumor, but the adhesions were found to be so extensive as to compel him to desist; this case recovered. And it was chiefly owing to this fact, the impossibility of determining the extent of the adhesions, which induced him to decline operating in several instances. He thought the statements coming from our professional brethren in France, should be received with some degree of allowance.

The depression limited by the abrupt border presented in the tumor, showed that a sac formerly constituting a part of the tumor had burst, and discharged its contents into the peritoneal cavity.

Dr. Peaslee regarded this explanation of the depression in the tumor entirely satisfactory, and it had not before occurred to him. He, how-

ever, thought the question of the propriety of the operation of ovariotomy quite too important to be decided by the results of less than a dozen operations performed in this city alone. We should take into account *all* the operations which have been reported, already amounting to hundreds, and make our conclusions accordingly. If he (Dr. P.) were to decide from his own limited experience alone, he would say that ovariotomy is not a dangerous operation, since all his operations (four in number) have proved successful. But he knows very well, that he cannot always expect to succeed. His own experience *alone* would indicate that tapping is even more dangerous than ovariotomy; since he had two patients die after that operation. But these and similar questions are to be established, if at all, on a broad basis of facts. Dr. P. himself believed that thus reasoning on the subject, we must conclude that there are cases in which ovariotomy is as justifiable as any capital operation; and he attributed his success in great part to his having selected cases in which it was proper. At all events, he had refused to operate in many cases during the past five years; and he had never operated unless he could control the circumstances of the patient, just before and for a sufficient time after the operation. He hardly thought he would operate in a hospital, whatever the other circumstances might be.

General Paralysis—Increased Solidity of White Substance of Brain.—Dr. Peaslee presented for Dr. Ranney, of the Lunatic Asylum, Blackwells Island, the brain of a patient who died of general paralysis.—C. L. S., æt. 36, by profession an actor, was on the 10th December, 1856, upon the usual commitment and certificate that he was a lunatic and dangerous to society, etc., removed from Bellevue Hospital to the New York City Lunatic Asylum on Blackwells Island. When admitted, he was found to be completely demented, paralyzed, unable to walk or stand, and with difficulty to swallow; he lingered nine days, and died on the 19th inst.

The following history of the case, communicated by his brother, together with the post-mortem appearances of the brain, indicate the form of the disease of which the patient died to have been paralysis generale. His brother states that he had always been a temperate man; some two years since, in consequence of domestic and business troubles, he passed through a period of great mental anxiety and excitement; a year ago last October, while in Philadelphia, he exhibited symptoms of insanity of a maniacal character, succeeded by a condition of prostration; upon recovery soon after of physical health, a change in his character was noticed; he became irritable, impatient of contradiction, at times despondent, and then very sanguine of success in his profession and business; his time, following such recovery up to April last, was spent in forming business plans, and studying the important characters of Shakespeare in the belief that he was to become a prominent actor, although his friends knew him to be incompetent in this respect from the great impairment his memory had lately suffered. When slightly excited, twitching of the corners of his mouth and tremor of the muscles of the face were noticed; his tongue was pro-

truded with difficulty, and his voice altered and cracked in its tone. All these symptoms increased in intensity about the beginning of April last; on the 8th of that month, he had a convulsion as described by his brother, of an epileptiform character followed by prostration; from this, he afterwards gradually improved until August last when he had another severe convulsion, followed by loss of consciousness for several hours; previous to this last convulsion, his left arm was noticed to have become paralyzed. He was then taken to Bellevue Hospital, and for a short time improved so as to be able to walk about the ward, and regained considerable power in the use of his tongue and arm. During the four months he remained there, his brother states that he had several convulsive attacks similar to those already mentioned, followed each time by increasing helplessness, and greater loss of mental power, until he became reduced to the condition in which he was brought to the asylum.

A more minute history of this period, should the Society deem it desirable, might doubtless be procured from the records of Bellevue Hospital.

The *autopsy*, fourteen hours after death, showed the skull about a quarter of an inch thick, and of texture less dense than usual; dura mater and arachnoids closely adherent over summit of cerebrum; arachnoid thickened and presenting an opaline appearance with serum beneath it and pia mater; general appearance of brain atrophied; the cortical structure somewhat softened and easily scraped with knife or finger-nail from the white medullary substance beneath; this latter was found to be hardened, of firm texture and glossy in appearance; the ventricles were largely distended, and contained ʒiv of clear serum; the floors of both lateral ones had a feeling of roughness to the touch; the foramen of Monroe was large and patulous, easily admitting the end of the little finger; the middle or soft commissure was wasted to a thin ribbon of almost transparent membrane; the pons varolii and medulla oblongata were of less than usual size, and the potuitary gland shrunken, and the upper portion of its peduncle enlarged. The weight of the brain drained of the semen in its ventricles, was two and a half pounds which is some ten ounces less than the average given by Solly.

January 14, 1857.

Ovum and Membranes.—Dr. Clark presented a mass, apparently a clot of blood, discharged from the vagina of a patient, who, some six weeks since received a fall, which was followed shortly after by free uterine hæmorrhage. This continued for a time, and ceased about six weeks subsequent to the injury; pains simulating those of labor occurred, and the specimen on the table was thrown off. It was brought to him (Dr. C.) by Dr. Galvan, with the request that he would examine it, with the view of determining its structure. Externally, it appears as if it might be a clot, the outer layer of which has become disorganized, and the microscope discovered the debris of a clot and well-formed animal fibres, and abundant infiltration of coagulated blood. Turning over the specimen, there is seen a cavity lined by membranes. Thinking it might be the investing membranes of a fœtus, he placed a portion under the microscope, and observed abundant villi of the chorion.

These, then, were the forming membranes from which an ovum had been discharged. The point of interest was, that there was membrane of an embryo, so entirely disguised by infiltration and coagulated blood in all its parts as not to be recognizable in any other way than by the microscopic inspection of its structure.

Brain—Effusion.—Dr. Harris presented a brain removed from a patient in the Quarantine Hospital. Gustav. Nelson, a Norwegian, 21 years of age, was admitted July 22, from the *Luleo* from Gottenburg. His appearance was that of perfect health; his cheeks full and red; the eyes clear and bright; pupils perfectly normal and uniform; the tongue clean; the pulse normal. From a shipmate, who came ashore with him, and who spoke the English language very imperfectly, I could only learn that Nelson had suffered for several weeks on board of the vessels; and at one time had been quite delirious; he complained now only of excessive headache and debility; his appetite was good; the secretions abundant and normal. The following morning, the attendant orderly mentioned that the patient had been very uneasy during the greater portion of the night, though apparently unconscious of it; now he was quiet, but being unable to converse with him, we could not detect the cause of his former uneasiness. The following and the succeeding day, the same occurred again, when we found him continually muttering the same cry, and repeating the same unmeaning sound (ay! ay!) until roused by shaking him, or loudly speaking to him, but then only to relapse again to the same state.

A closer examination, which now became necessary, revealed nothing; no injury of the head could be found; the pupils responded equally to light; although scarcely able to use his extremities, difference in their motion could be observed. This state of things continued for several months, unabated by any medical treatment, with shorter or longer omission of these paroxysms; until, finally, they became more frequent and violent, though unchanged in their character, the patient's strength began to fail, and he died suddenly and quietly October 16, 1856.

The post-mortem examination revealed excessive distention of the ventricles, from about six ounces of perfectly clear serum.

Necrosis of Superior and Inferior Maxillary Bones, Removal Successful.—Dr. D. S. Conant presented the superior and inferior maxillary bones, for Doctor G. Grant, of Newark, N.J., with the following history:—Mrs. B., of Newark, married about the age of 20; general health had been good, with no scrofulous taint in her parents or their family; no previous sickness, except at one time, during which she was salivated, with no bad results. During the first year of her marriage, when about four months pregnant, she was taken sick, in the fall of 1852, with remittent fever, which continued about three months, during this time she took, as is alleged, about 6 grs. of calomel. This caused salivation to such an extent, that the bones were entirely denuded of their covering, and the teeth, which were very fine and perfect, one by one dropped out. About nine months after this Dr. G. was called to see the case; finding the inferior maxillary bone almost entirely destroyed, and the superior maxilla of the right side, and a part of the superior maxilla of the left in the same condition, attended by an

excessively fætid discharge, he advised an operation for removal of the whole of the diseased portions. The consent of the patient having been obtained, he used in the meantime a solution of muriatic acid, to correct the fætor, and prepared her for the operation. On the 26th day of August, 1854, Dr. Grant, assisted by Dr. Baldwin, removed the whole of the superior maxillary of the right side, and the diseased portion of the left, by carefully dissecting off those portions of the surrounding tissues which were attached. The operation was attended with considerable pain and constitutional disturbance, and with little hæmorrhage, it being deemed unadvisable to use any anæsthetic. The patient recovering with so much vigor from this operation, it was deemed advisable to remove the diseased lower jaw soon, which was done four days after, the same gentleman assisting. This operation was conducted in the same manner as the other, by Dr. G. The patient rendered this operation more protracted and difficult by an hysterical convulsion. There was no hæmorrhage of any amount—the wound was left to heal by granulation; no ligatures were necessary. The condyloid processes of the lower maxilla remained healthy and intact. The patient rapidly recovered—no unpleasant results remaining, except what would naturally arise from the loss of the jaw.

The patient has had one child since, and this, with her other child, enjoys perfect health. She has had an attack of congestion of the liver, for which she has taken calomel, even to slight salivation, with no bad results.

Colloid Tumor Developed from the Os-Femoris.—Dr. Louis Bauer laid before the Society a colloid tumor, of the size of a man's fist. The question of malignity or non-malignity attached to the specimen, gave it more than ordinary pathological interest. The tumor had required some two years to attain its present growth; and seemingly, originated from the left femur, posteriorly to the large trochanter; surrounded the bone on both sides, invested the crural artery, and caused incessant pains and loss of flesh. At one time it formed an abscess posteriorly, and on being opened, discharged viscid substance with some pus. The wound soon closed, leaving, however, a fistulous opening, through which bare bone could be felt.

About six months ago, Dr. Bauer was requested by Dr. Eisler to remove the tumor as far as practicable. After the portion presented had been taken away, the femur was found to be extensively carious. The carious bone was gouged off, reducing the remainder to a shell. Attempts were made at isolating the crural artery, and to remove the anterior lobe of the tumor also, but unsuccessfully. It had therefore to be left and the wound to be closed by suture. The latter cicatrized without great delay, by simple appliances, and the patient has since not only enjoyed a fair share of health, but acquired strength.

As far as Dr. Bauer could learn, the family of the patient was not afflicted with malignant disease, and the latter, himself, had been previously of undisturbed health. The Dr. called the attention of the Society, first, to the situation of the tumor. Its usual place of origin had been found by Lebert to be the omentum majus. Dr. Bauer thought that there was but one instance on record, where colloid had grown upon a bone.

As to the question of malignity, the opinions of pathologists differ. M. Lebert, of Paris, pronounced it unequivocally malignant; while Paget and Rokitansky reserved their opinion. Van der Kolk and Frerichs, however, are positive, that colloid has nothing in common with malignant tumors. Their opinions are based on numerous clinical and microscopical observations.

Frerichs particularly mentions that those large cells, observed in the kolla of this species of tumors, were not nucleated, but merely granulated, and he considers them to be the epithelial cells from the partitioned cavities of the tumor. That pathologist had collected some forty cases, that had invariably presented the same feature, and most of the patients had recovered where the tumor had been removed entirely.

Dr. Bauer did not feel justified in expressing a decided view, having had but a limited experience on this subject, but as far as the present condition of the patient and of the formation of the tumor was considered, (having carefully examined the latter) he felt inclined to side with Van der Kolk and Frerichs, and he should like to hear Dr. Alonzo Clark's views of the nature of these growths.

Dr. Clark observed, that, in examining the nature of colloid disease, it is necessary to consider it as existing in two forms. One, in which the diseased tissue becomes infiltrated, and greatly thickened by a solid transparent matter, the structure presenting no cysts appreciable by the naked eye, and becoming as firm as the scirrhus variety of cancer. Of this variety, he saw an interesting specimen in the hands of the late lamented Dr. Swett. The other form constitutes a tumor, which is composed of fibrous stroma and cells, containing jelly-like matter, of greater or less consistency. Of the nature of the first variety he is not prepared to express an opinion—of the second, his examinations have extended to only three specimens. These were constituted of fibres, differing in no material respect from those of an ordinary fibrous tumor; the stroma being destitute of every thing which could be regarded as cancer cells, and cysts containing irregularly formed cells, or cells of doubtful character; and these alone could give rise to the suspicion of malignancy.

It has been his belief, that this second variety of colloid matter should be studied anew, with reference to this point, believing that the suspected cells could as well be considered epithelium of exuberant growth, as establishing an alliance between these tumors and cancer.

Abscess of Ovary—Rupture—Peritonitis—Death.—Dr. Thos. F. Cock presented a specimen of abscess of left ovary, which discharged its contents into the abdomen, causing peritonitis and death. Louisa Charles, æt. 26; German; married; admitted October 2, into N. Y. hospital; has been sick about five weeks; was taken with a pain, not very severe, in the hypogastrium, could not be attributed to exposure, and was not at the menstrual epoch; catamenia came on about ten days after, and continued up to a week previous to admission; menstruation has always been regular. Has had, recently, nausea, and vomited her meals. On admission, skin hot; pulse about 110; a well-defined swelling in the hypogastrium, very tender—extending into left inguinal region; considerable pain in the back; anorexia;

bowels regular; tongue clean; countenance and conjunctivæ yellowish. Ordered—hirud. med. ad loc. dolor; sol. sulp. morp. at night.

December 5.—Bowels loose last night; pulse 112; skin hot; tongue furred; severe pains in the epigastrium, breathing anxious. One P.M. —Sudden seizure with severe pain in abdomen; surface cold; pulse feeble and frequent; face distressed; greenish vomiting. Ordered—stimulants; sol. sulp. morp.

December 6.—Revived somewhat yesterday, but sank and died this morning.

Autopsy.—Sero-purulent effusion in large quantity in the sac of the peritoneum; intestines united to each other, and to the abdominal walls by old adhesions; over them was a coating of recent lymph; several small hard tumors between the rectum and vagina; left ovary and left lateral ligament were occupied by a large abscess; a point of rupture was found on its posterior aspect.

Phthisis in a Parrot.—Dr. E. R. Peaslee presented a specimen of some pathological interest, in comparative anatomy. An instance of tubercular disease of the lungs, occurring in a parrot, a native of Africa, and brought from that country in the bark *Peru*, which was wrecked last winter. In taking to their boats, this parrot was saved by the crew. For the last three months, the bird has exhibited all the symptoms of phthisis, except expectoration; loss of appetite, flesh and strength; diarrhœa; occasional catarrh; excessive dyspnœa, and great irritability and querulousness.

Post-mortem examination discloses the right lung adherent to the costal parietes throughout its whole surface (as usual in birds), and scattered through its substance were several small tuberculous masses, most of which have been removed. The smaller mass is all that remained of the left lung. To this anteriorly and inferiorly was attached the large tubercular mass, filling up the whole cavity, and crowding down the heart and intruding upon the other lung. The ulcerated face of the mass rested upon the diaphragm, and pus and false membrane occupied the intervening space; thoracic glands were tuberculous; the inferior surface of the liver sparsely studded with tubercles; mesenteric glands were free.

Unilocular Ovarian Cyst—Perforation of Appendix Vermiformis—Peritonitis—Death.—Dr. Peaslee presented a specimen which had been sent to him by a distinguished physician in Paris, viz., a large sac, developed in the peritoneal cavity, in consequence of chronic peritonitis. On examining it at first, Dr. Peaslee at once pronounced it an ovarian sac, but on opening the account of the post-mortem examination, which accompanied the specimen, he found it expressly stated that "the uterus and ovaries were entirely free from disease," and that this sac was the "result of a previous peritonitis." The reputation of the physician alluded to had induced Dr. Peaslee to present the specimen; though still felt obliged to adhere to his first impression as to the nature of the sac.

The patient, a lady aged 39, had been under Dr. Peaslee's care, a year ago, for dropsy, and which gradually diminished under tonic treatment. Though every thing in the history of the case pointed to

the probability that it was ovarian dropsy; still, Dr. Peaslee could not, by examination, both external and internal, discover any sac or tumor, and was therefore obliged to suspend his decision that it was ovarian disease. Meanwhile, the fluid continued to diminish; and to complete its absorption, she was advised to take a sea voyage. On her arrival in England, the fluid had apparently entirely disappeared, and she continued in perfect health till October last, when she was suddenly seized with symptoms of acute peritonitis. Being then in Paris, the physician alluded to was called. She died eight days after of the acute disease. At the first visit, his attention was directed to the fact that she had had a dropsical accumulation, but which had disappeared; and, on examination, he found there was still no dropsical fluid at all. Within twenty-four hours, it, however, began to accumulate, and continued to increase till death occurred. The following is the history of the autopsy, as drawn up by Dr. Bigelow.

Post-mortem examination.—A false membrane lined the entire abdomen, and was filled with a milky fluid—not adherent to the peritoneum or intestines, except by a few fibres of lymph in the cœcal region; from the rest it peeled off like the skin from a ripe peach; it lay upon the vertebral column, and had forced the intestines (which contained neither gas nor fæcal matter) in the hypochondria and epigastrium. This part of the disease is evidently of long standing, a chronic peritonitis of perhaps years. On removing this membrane, the cause of the recent acute and fatal peritonitis, became apparent. The appendix cœci was perforated at its free extremity by the foreign body sent herewith, and which was half way out of the appendix; the latter was completely disorganized, and pultaceous on its underside throughout its entire length; and a portion of the cœcum at the attachment of the appendix, and corresponding to its lower side as large as a quarter of a dollar, was in the same condition, so that my finger perforated it without the least effort. Fæcal matter and intestinal secretions had escaped by this channel into the cavity of the peritoneum. The intestinal and parietal peritoneum under the old false membrane was highly vascular, and could be, to a great extent, with recent plastic lymph, easily removed with the back of the scalpel. The sac contained ten to twelve quarts of the milky fluid spoken of, and the peritoneal cavity behind it contained almost a quart of transparent serum. I send one-half of the foreign body which perforated the appendix—the other half being lost. The uterus and ovaries were perfectly healthy. The other organs were not examined.

I would remark, as a very singular phenomenon in this case, the rapid secretion of so large a quantity of fluid in the old sac under the influence of a disease, wholly apart from it, as compared with the amount secreted outside of it, by the inflamed peritoneum, where indeed we might have looked for a like quantity.

Dr. Peaslee remarked, that the post-mortem examination showed that the acute peritonitis had been excited by a foreign body, in the appendicula vermiformis. This had finally caused a perforation of the latter, and was itself found half projecting into the peritoneal cavity. The sac Dr. Peaslee now presented, was found in the peritoneal cavity,

but was "nowhere connected by visible vessels to the peritoneum; being merely in contact with the latter, and easily peeled off from it," as "the skin of a ripe peach from the pulp." The sac contained ten to twelve quarts of a milky fluid. There was also about three pints of the fluid usually present, in cases of acute peritonitis, in the peritoneal cavity. It was remarked, as singular, that "so small an amount of exudation had been produced into the peritoneal cavity by the acute disease, while it had so rapidly produced such an abundant secretion into the sac." The foreign body which had caused the acute attack, was a concretion of phosphate and carbonate of lime, with hardened mucus and fæcal matters, and was three-fourths of an inch long, by one-third of an inch in diameter.

Now, as giving some plausibility to the idea that the sac under consideration was the consequence of a previous peritonitis; Dr. Peaslee would also add, that the patient actually had puerperal peritonitis, about a year before she first came under his care, and before any dropsical accumulation had been observed. Still, the following questions occurred to him, and on which he wished to obtain the sense of the society.

1. Had any member of the society ever seen a case of encysted ascites (as this was assumed to be, in the report of the post-mortem examination, and which is recognized in the books)?

2. Can it be regarded as possible, that a perfect, closed sac, highly vascular and smooth externally, can be formed from the exudation of acute peritonitis, and subsequently secrete from the blood so rapidly, as this sac did during the last eight days of life.

Dr. Clark stated that he felt very sure he could see where the tumor was attached to some other part (doubtless the uterus), and that he had never seen an instance of encysted ascites.

Dr. Peaslee thought it might therefore be regarded as settled that this is a unilocular ovarian cyst, as he had at first considered it. And in the existence of perfectly developed sacs enclosing fluid, as a consequence of peritoneal inflammation, he would express his entire unbelief.

Fatty Degeneration of Heart.—Dr. J. T. Metcalfe presented a specimen of enlargement of the heart, removed from a gentleman, 47 years old, of temperate habits in drinking; otherwise, a free liver. Last Monday week he was not well, but went down town to his business. The next day he complained slightly. On the following evening he went to the theatre, not, however, feeling perfectly well. On Friday he was still more uncomfortable, and after dinner complained of a sensation of faintness, with pain in the left chest, extending to the arm and wrist of that side; while proceeding to the adjoining room, assisted by his wife, he fell down on the floor and died.

Post-mortem examination disclosed the lungs free from attachments, and engorged. Pericardium large, and the heart distended with dark coagulated blood; valves somewhat diseased; the walls of left ventricle thick and softened; and the microscope revealed the substance of the right ventricle in a state of fatty degeneration, being infiltrated with oil globules; no healthy muscular tissue; heart weighed

twenty-four ounces. Abdominal viscera normal; brain healthy in color, consistence, and vascularity.

Vegetations in Larynx.—Dr. Robert Watts presented for Dr. James W. Elliot, Abington Square, a specimen of chronic laryngitis, occurring in a child, æt. 2 years. First saw him July 22, 1856, apparently in good health and running about the house; my attention was called to the loss of voice, he could not speak above a whisper; at this time learnt from the mother that he had been gradually losing his voice since about the middle of May; first noticed when the child would cry. Gave expectorant mixture; he slightly improved, but continued nearly the same till Friday, September 5, when he was not so well; some dyspnœa with cough, particularly at night.

September 6.—Worse.

September 7.—Had an attack very analogous to one of severe croup, but *not* the *pure* croupy cough. Gave hyd. sub. mur. gr. iij, quinine gr. ij, pulv. ipecac gr. $\frac{1}{4}$, every three hours, continued these for twenty-four hours; the child much improved. Gave the same powders morning, noon, and night, for the next forty-eight hours, and afterwards every night; he continued to improve till about October 17, when he, once or twice, said a word in his natural voice. Still giving the same powders every night.

October 21 and 22.—Worse.

October 23.—Had another attack, but rather lighter than the first, and not as much resembling croup. Gave the same powders every three hours for twenty-four hours, and then night and morning (omitting the quinine). Gradually improved, but slower than after the first attack; dyspnœa continuing, though somewhat abated; but little cough.

October 29.—Suspended the powders, and gave potass. iod. in half-grain doses three times a day, and applied tinct. iodine to throat, but these appeared to irritate the child, and therefore discontinued them. Gave expectorant mixture with Dover's powders at night; always relieved after the mixture.

November 15.—Had a third attack, about as severe as the second. Gave hyd. sub. mur. gr. iij, pulv. ipecac gr. $\frac{1}{4}$, every three hours.

November 16.—About the same. Put a blister over the larynx, apparently much relieved when the blister began to rise; gradually improving, but very little.

November 19, at ten A. M.—An attack of suffocation lasted several moments. Parents thought he was dead; revived, and was about the same as before.

November 20.—Another attack of suffocation, about the same hour; did not last quite as long, and not quite as severe.

November 21.—Better. Giving nothing but expectorant mixture.

November 22 and 24.—Still improving. Same treatment.

November 26.—Child easy, but sinking from exhaustion. Died at eight P.M.

November 26.—Had but very little dyspnœa the day of death, and none at time of death.

It should be observed that he had no dyspnœa and but little cough between the first and second attacks, which were about six weeks from

each other; but between the second and third attacks, which were a little over three weeks from each other, the dyspnœa continued to considerable extent with some cough; there was moderate expectoration during the whole sickness, and sometimes very copious; the child was always relieved after an emetic of ipecac; always worse at nights than in the daytime, except the last three nights before death, when he was easier.

January 28, 1857.

Aneurism of Arch of the Aorta.—Dr. L. Bauer called the notice of the Society to an unusually large aneurism of the arch of the aorta. Unfortunately, he could not give the history of the case in detail, as the patient was first seen a few days before his death.

The patient, æt. 37 years; nine months before his death, in stretching himself, found that something ruptured about his neck; and, immediately afterward, discovered a small pulsating tumor, which continued to increase until it acquired the size of about six inches in circumference. It was situated so as to press upward the sternal portion of the clavicle; at every point, pulsation could be clearly detected; its walls were exceedingly thin, and, every minute, rupture was expected. He died, finally, of suffocation and starvation.

On inspection, the arch of the aorta is seen so enlarged as to admit the hand. The heart presented a flabby appearance.

Injection of Iodine in the Cavity of Joints.—Dr. Bauer next brought before the notice of the Society, the case of a diseased knee joint, which he had been treating with injection of iodine. He was more conversant with its history than in the former case, as the patient had been some months under his charge.

Man, æt. 22 years. Eleven years ago he struck his thigh with a hammer; inflammation of the joint followed; he was attended for a long time by a physician who ultimately succeeded in relieving the joint; but, the constitution seemed to be so much enfeebled that he was advised to go to sea. Soon after, he hurt himself again; great trouble and long suffering ensued. Some five months ago, Dr. Bauer's advice was asked; at that time the tumor was in length eight inches, and five inches wide; the knee was stiff, and the knee cap was adherent to the exterior condyle of the femur; fluctuation only was evident at one single point; the fluid seemed to be underneath the fascia lata. He suffered pain at internal portion of knee joint. Made a puncture, and removed twelve ounces of a yellowish liquid, which, under the microscope, seemed to be without organization, save a few cells; a considerable quantity of albumen, but no blood globules. Subsequently the old adhesions were destroyed, and the joint surrounded with adhesive plaster, and a straight splint applied; six weeks after the bandage was removed, the liquid had again collected, and iodine (℥iss.) was injected; the effects of that injection were pretty intense. Two or three hours after the injection of iodine, there were developed great constitutional disturbance; heat of skin; pulse very high; and tongue dry; also, sneezing. In the main, the symptoms were similar to those in which iod. potassium is used. This condition subsided, and was followed by great exhaustion, which lasted for weeks afterwards. Yesterday morn-

ing, on removing the bandage, more fluid was detected, and removed by puncture, taking care that no air should enter; about nine ounces of fluid of great specific gravity, were evacuated. It is in a fine plastic condition, like syrup, of a slight red tinge; this seems to depend upon the admixture of blood; the original color was gray or yellowish. It was a matter of interest to ascertain if any iodine was contained in this liquid. None, however, was detected by the microscope, or by chemical tests. A great amount of fibrine was found; also, a great number of pus globules. The points of interest then, in this case are—the rapid absorption of the iodine, and its severe constitutional effects. I diagnosticated the existence of the fluid in the sub-rectal bursa. I mention this inasmuch as the collection of fluid there is extremely rare. It seems to be owing to direct mechanical influences; while the affection of the knee seems to be more of a consecutive nature.

Dr. James R. Wood asked the question as to whether surgeons agree with the physicians as regards the effects of iodine thus administered.

Dr. Bauer, in reply, stated that Nélaton observed a great number of injections in articular cavities, and his statements agree with the facts as stated above; that the same was the case with the English surgeons.

Necrosis of Lower Jaw.—Dr. Markoe exhibited a portion of a necrosed lower jaw bone, removed the day before at the New York Hospital, by Dr. Halsted. The history of the case was a very simple one, inasmuch, as no assignable cause could be traced. It occurred in the person of a man about the middle period of life, who, so far as could be ascertained, had not suffered from any injury of the jaw; had not recently taken mercury, and had not been exposed to the vapor of phosphorus. About five months ago he was attacked with pain in the face and swelling of the cheek, attended with rapid suppuration, opening beneath the jaw. The swelling increased, spreading along the jaw from the ramus on the right side to beyond the median line on the left. Other openings formed, through which dead bone could be felt. The swelling was very firm and hard to the touch. There were several openings inside of the mouth, and the teeth were loose. He was somewhat reduced by his disease. He was kept on nourishing diet, and a tonic and stimulant regimen for more than two months, when his condition having very much improved, an operation was performed for the removal of the dead bone. An incision along the margin of the jaw exposed the bone, which was found entirely dead, discolored, and as it were, worm eaten, but firm. It was sawn through opposite the first molar tooth, and the outer portion seized with strong forceps. It separated at the articulation coming away entire, and being dead to the very extremity. The other portion was pulled away in several fragments, in all reaching an inch beyond the symphysis. The sequestrum lay in a bed of granulations, which lined the inside of the solid swelling which had encased it; but in that swelling, which, before the operation, had felt so much like a bony involucrum, no bony deposit was found, except here and there a few sandy particles on its inner surface.

Dr. Markoe observes, that it would appear that this disease was be-

coming more common than formerly. Dr. James R. Wood had recently several cases; he had one himself at the Jews' Hospital; and there was one at present in the Bellevue Hospital. On looking over the subject he thought that there was something in the history of the disease yet to be supplied. He referred particularly to the absence of bony involucrum, and to the well-known fact of reparation taking place when larger portions of the jaw had been removed.

Senile Gangrene.—Dr. Markoe next exhibited the aorta, common iliac, femoral and popliteal arteries, taken from a patient dying from senile gangrene. The patient was an old man, between 60 and 70 years of age; while at sea a passenger stepped on his great toe, on which he had long had a bunion; inflammation followed, and the surgeon on shipboard applied some nitrate of silver, which seemed to aggravate the symptoms, and shortly after a sloughy appearance took place round the original bruise. Dry gangrene spread gradually from this point on to the great toe, reaching to its base and gradually involving more or less of the smaller toes, spreading up half-way along the dorsal surface of the metatarsus. This was accompanied by a good deal of irritative fever. The gangrene spread slowly after his admission to the hospital, but three or four days before the operation it presented an appearance which he has since regarded as of more significance than was at the time attributed to it. This appearance was that of a tongue or peninsula of reddened and inflamed integument, running up on the inner aspect of the foot above the ankle, and gradually falling into mortification. This seemed more like the mode of progress which obtains in mortification from obstructed arteries. Dr. Markoe had never seen this mode of rapid irregular extension in ordinary senile gangrene from enfeebled capillaries. The operation was performed below the knee, and, contrary to our previous experience, the mortification attacked the stump, the irritative fever increased, and the patient died within a week after the operation. He had examined the case after death with a great deal of interest, and the specimens presented seem to explain the unfortunate result.

Autopsy.—The heart is nearly normal, presenting only some slight ætheromatous deposits around the valves. In the aorta are seen numerous patches of ætheroma; some of the plates are calcified, others have disappeared, leaving a denuded surface. All the smaller arteries down to where the tibial was cut in the amputation are extensively calcified. This is still more marked on the tibials and radials, etc., some of which seem to be mere bony tubes or cords. Besides this calcification of the coats, however, there is observed all along the great vessels, and more noticeably in the smaller trunks, a puckering and irregular contraction of the coats of the vessels sufficient to diminish their calibre at different points. At the lower part of the femoral artery an annular contraction exists, so considerable, that the calibre of the tube is reduced to one-third of its proper dimensions. This seems to be due to a puckering in of all the coats of the vessel, at the point of ligature of the popliteal; although the artery is extensively diseased, yet a clot has formed within, and every thing about the ligature seems to promise a perfect and safe closure of the arteries. We have here, therefore, not only the enfeebled

condition of the capillaries, which is the ordinary cause of senile gangrene, but we have also an obstructed condition of the trunks of the vessels, just such, in effect, as obtains when these trunks are obliterated by adhesive inflammation. This, as far as Dr. Markoe's experience went, was a rare combination, and determined, no doubt, the spreading mortification, and the fatal termination of the case. If we have nothing to deal with but the enfeebled capillaries of old age, by amputating higher up nearer the centre of circulation, and therefore through stronger capillaries, we have no return of mortification in the stump, and, if other circumstances are favorable, the patient may do well. Every surgeon knows, on the other hand, the danger in amputating too soon in those cases, in which, in young people, gangrene is the result of arteritis with obstruction. Dr. Markoe believed that, as the pathological condition was so different in the two cases, a clinical distinction might be drawn; a distinction, if correctly drawn, of great practical importance, in reference to the question of amputation.

Dr. McCready stated that he had met with a case where dry gangrene in three fingers was caused by a tumor pressing upon the subclavian, in a woman, 30 years of age. In another case of disease in femoral and obliteration of anterior tibial arteries, there was dry gangrene of toe.

In reply to a question from Dr. Clark, Dr. Markoe said, that he did not mean to draw a distinction between inflammation and obstruction of arteries, for that in their results, as far as producing gangrene was concerned, they were nearly identical. The distinction he was insisting upon, was one between gangrene produced by loss of power in the distant capillaries, as of the feet and hands of old people, and gangrene produced by obstruction of principal trunks, such as occurs in young persons from arteritis. In the affection of the capillaries, Dr. Markoe had never seen the disease spread beyond the ankle, while in obstructed artery a whole limb often perishes, usually by successive attacks of gangrene. In the first case we may amputate safely; in the second, we operate with doubt, hesitation, and danger, because we do not know how high up the obstruction may be.

Dr. E. R. Peaslee remarked, that he had never yet known of a case of gangrene in a young person, where it was not owing to some obstruction; but, on the other hand, it seemed to him that the treatment of gangrene in old persons, went to show that it also often depended upon obstruction in the larger arteries. Practically he thought it might be difficult to decide what was best to do, for if amputation be resorted to, gangrene is apt to set in.

Dr. James R. Wood thought this to be a very interesting subject, especially in a medico-legal point of view. He stated that the fact was settled long ago, that disease of the capillaries of the extremities was a cause of gangrene in both young and old. Also, that gangrene was sometimes the result of obstruction. He thought that the diagnosis between these two forms ought to attract the attention of the society, and hoped that either the subject would be discussed at some future day, or be referred to a committee to report.

Tubercle in Cerebellum.—Dr. Markoe next presented a specimen

of tubercle in the cerebellum, presenting the symptoms of hydrocephalus, with inflammation of the cerebellum, and marked symptoms of turning during life.

P., æt. 4 years, died January 17, 1857. Was taken 30th December with what appeared to be remittent fever; after a few days, stupor came on, with dilated pupil, and he died with the usual symptoms of acute hydrocephalus. He was a delicate child from birth; premature, eight months; but seemed well until eighteen months old, when he had cholera infantum, which was very severe, and attended with some symptoms of cerebral irritation, mainly showing themselves in violent convulsive movements of the arms and legs. He recovered, however, and seemed again well, but weakly; did not walk till he was twenty-two months old, and never seemed strong on his legs.

At about the age of two years, he began to have turns of shaking his head, from side to side. This he would do until reproved, when he would stop; it was at first thought to be done in play. About this time also, he began to have spells of turning round; he would leave his play and turn round and round, slowly, with his eyes thrown up; when spoken to, he would stop, and go on with his play again. He seemed, however, to have an uncontrollable desire to turn round, and if he could get away, he would go into a closet or some out-of-the-way place, and go on with his turning. These turns would last days, and then cease; they recurred at intervals until within a few weeks of his death.

At the age of two years and ten months, he had a stupid turn come over him; appeared very dull; stammered in speaking, and had a vacant stare; this continued about three weeks, and then disappeared. From this time, his mother considered that his mind, which, before had been exceedingly bright and active, did not continue to develop.

At the age of three years and two months, he awoke in the night, screaming violently, and cried for two hours, putting his hands to his ears, but would not say that he felt any pain; this occurred several times. By the advice of his physician, he spent a summer at Rockaway, with great benefit to his general health; but, as winter came on, he declined again, though nothing was observed until his last fatal attack.

Autopsy showed substance of brain healthy; ventricles greatly distended with serum; fornix softened to a pulp; membranes injected slightly, and raised by turbid serum, most marked at the base; on the upper surface of cerebellum the serum had a purulent appearance; a tubercle existed on the surface of, and imbedded in, the substance of the lobe of the cerebellum; it was half an inch in diameter, and might be supposed to have pressed upon the crus cerebelli, over which it lay, though not in immediate contact with it.

Dr. Markoe regarded the occurrence of this tubercle in the cerebellum as the only circumstance he could fix upon, in explanation, of the phenomenon of rotation, and the experiments of Brown-Séquard, Longet, and Flourens, show that injury to the crus cerebelli produces this turning. And he supposed, from the situation of the tumor over the crus cerebelli, that either the irritation which it caused on that point, or its mechanical presence, was sufficient to produce this phenomenon.

Œdema Glottidis.—Dr. Alonzo Clark presented a specimen of œdema glottidis. Having read the account of the death of the Hon. Preston S. Brooks, of South Carolina, in the morning papers, he thought, possibly, in that connection, the specimen might interest the Society. He could not give a complete history, as he had obtained the specimen from a young physician who was, himself, but little conversant with its history.

The patient, a woman of the town, had been stout and hearty looking; had enjoyed good health a few days ago, when she seemed to take cold, and was confined to her room for a few days. After apparent improvement, she suddenly grew worse, her friends became alarmed, and the physician was sent for; he arrived fifteen minutes after, and found her dead. Autopsy revealed abundant effusion underneath the arytæno-epiglottidean folds. In a word, she died of œdema glottidis. It struck him, as he read the history of Mr. Brooks' illness, that he must have died in the same way, although the statement is that he died of croup.

It is probably remembered by some members of the Society that the late lamented Dr. Beck prepared a paper on the cause of Washington's death, which he ascribed to the same affection.

Supra Renal Capsules.—Dr. Clark now exhibited some small sections of the supra renal capsules, of a patient who had been under the care of Dr. Taylor, in whom it was thought that no disease of the capsules existed, at the post-mortem, notwithstanding that marked discoloration of the skin that Dr. Taylor has described in his paper on the subject. Dr. Taylor left a small piece for his examination. He began somewhat in the dark, inasmuch as he had never examined these organs microscopically. The capsules have an external investment, from which fibres penetrate into the interior of the organ. The substance in the interior seems to be the proper organ. It is composed of a vast number of granular cells, in most of which there is a nucleus; the cells are of a large size, and some of them elongated; here there can be recognized a nucleus and nucleoli, but not in all of them. Between these cells is a moderate amount of fibrous tissue; the organ is most extraordinarily supplied with nerves. Where the nerves go, he cannot tell, for the piece examined was too short. It seems to him that the nervous element is an important part. The arrangement of the cells is somewhat linear, though not strictly so; there being a certain amount of areolar tissue running between them; this, then, seems to be the structure. He found no opening in any of these cells, but the whole interior is lined with a countless number of extremely minute and slightly yellowish granules, the office of which, he supposes, can be found out when we find what is the office of similar cells in the thyroid glands and spleen. These cells seem to have no communication with each other. In the examination of a section of the supra renal capsules in a person who died of tuberculous disease, this is the appearance; but, in Dr. Taylor's specimen, there is a world of fatty matter; the cells are full of oil globules, like fatty degeneration in the liver and kidneys; almost all the cells are so laden with this fatty substance, either in the form of globules, or in a crystaline form, that they be-

come opaque. There was also a great quantity of oil spread over the whole field; in other words he takes it to be a fatty degeneration; and, so far from being free from disease, he regarded it as very heavily diseased, although its bulk is not increased. The fibres are increased, and it seems probable that there is a double degeneration; an increase in the fibrous element, and afterwards a contraction to compensate for what would have been increased by addition of the oil.

Dr. Peaslee thought the discoloration of the surface, implied that the supra renal capsules must have some pretty important function. He was struck with the similitude of Dr. Clark's description of the microscopic anatomy, in relation to those given by Bergman and Kölliker. He stated that Kölliker divides the organ into two parts, cortical and medullary. That he describes the cortical portion as elongated closed tubes, called "cortical cylinders;" he believes the internal portion consists essentially of nerve cells. For the present, we can not suppose that they have any connection with the kidney. As to the differences presented by the two specimens, he thought Dr. Taylor's specimen was a well-marked case of fatty degeneration.

Dr. Clark stated that there were no cells which he could recognize as nerve cells.

Dr. Peaslee stated that Kölliker spoke of these cells resembling nerve cells, but does not speak confidently.

Dr. Metcalfe thought that the latest researches on the action of these bodies, as concerned with vitality, went very clearly to show that they were immensely important. He thought this proved conclusively by the experiments of Brown-Séquard on a large number of animals; in which cases, their removal was uniformly followed by fatal results.

Dr. Post stated that Brown-Séquard informed him, the removal of the capsules caused death in a much shorter period, than when the kidneys were extirpated. That the longest period in which any animal lived, was thirteen hours; and that the operation itself was of little or no consequence in that connection.

An Anomalous Concretion in the Rectum, with Cancer of the Uterus, involving the Rectum and Bladder, and establishing a Recto-Vaginal Fistula.—Dr. J. C. Hutchison presented a specimen having the following history:—Laura C., æt. 48, chambermaid, born in France, widow, and has two children; was admitted into Brooklyn City Hospital, October 21, 1856. Twenty-five years ago, she had an abortion, and soon afterwards symptoms were developed, which were supposed to indicate the existence of cancer uteri; for which she was treated in France and this country. No other reliable history could be obtained. When admitted into the hospital she was much prostrated; the cancerous cachexia was distinctly pronounced; she had a fætid vaginal discharge, and an almost constant diarrhœa, the discharges being involuntary, and taking place partly through the vagina. There was no irritability of the bladder. She was examined per vaginam, by Dr. H. S. Smith, who was then on duty, and extensive cancerous ulceration was recognized. She died November 4.

Post-mortem Appearances.—The examination was limited to the pelvic organs. The specimen shows entire removal of the cervix uteri

by ulceration, which, in the left side, has extended to the body of the organ, and the left ovary which is agglutinated to the left side of the uterus. The ulceration having cut off the cervix, has extended directly back, and involved the anterior portion of the rectum, to the extent of about one and a half inches longitudinally, establishing a recto-vaginal fistula. The upper portion of the vagina is also involved in the disease. There is, also, a tumor in the bladder, about the size of a filbert, an inch and a half to the vesical termination of the urethra, and a little to the left of the median line, filled with soft cancerous matter. In the rectum, about seven inches from the anus, and immediately above the portion involved in the cancer, was found an irregularly rounded dark concretion, about one and a half inches in diameter. It consists of a hard shell, filled with a softer material, having a fæcal odor. On examining the internal portion of the concretion under the microscope, Dr. Isaacs found in it vegetable cells, striped muscular fibre, and oil globules.

SOCIETY OF STATISTICAL MEDICINE.

Regular Meeting, January 12, 1856, Dr. Peaslee, *President.*

Reported by E. H. Janes, M.D., *Secretary.*

Successful Employment of the "Ready Method in Asphyxia" of Dr. Marshall Hall, in a case of Poisoning by Laudanum.—Dr. Lewis read the following history of a case of poisoning by laudanum, in which he successfully resorted to Marshall Hall's new method of recovering persons drowned, or otherwise asphyxiated:—On the 15th day of August, 1856, Mr. J., a young man, æt. about 28 years; sound constitution and temperate habits; dined and passed the evening with a friend, in the course of which he was heard to complain of pain in his left side about the region of the heart, for which mustard was applied.

At ten o'clock he left his friend's residence, and made his appearance at his hotel about midnight, and shortly after retired to his room.

In the morning, the door of his room was forcibly opened, and he was found lying upon his back; his respiration stertorous, and not exceeding five or six to the minute; his pulse slow and full; pupils contracted; countenance livid; exhibiting no sign of consciousness. An attempt was made to arouse the patient by dashing cold water upon the face and chest, shaking, applying the salts of ammonia to the nose; but so profound was the coma, that no indication of consciousness could be elicited. Weak brandy and water was next introduced into the mouth, and an attempt made to produce deglutition by exciting the muscles about the pharynx, when, much to the surprise of the bystanders, his countenance became darker, and all respiration ceased.

The patient was immediately turned upon his face, in order that the fluid might escape; sinapisms were applied over the entire length of the spinal column, also over the extremities and chest, and artificial respiration commenced without delay.

For a period of five hours and a half, artificial respiration was constantly continued, with an occasional brief interval to enable us to determine whether all normal respiration had ceased. Dry friction was made simultaneously upward along the course of the veins, the beneficial effects of which were apparent.

During the time when artificial respiration was performed, the aspect of the case was very variable. At times the pulse was irregular and thready; at others, it was less frequent, more regular and firm. Equally great were the variations noticed in the respiration. When artificial respiration was for a time discontinued, respiration would continue with some degree of regularity at longer than natural intervals, and then become less frequent, and more irregular until artificial respiration was resumed. Once during the time that artificial respiration was continued, a pint of warm coffee was, by means of the stomach pump, introduced into the stomach with evident good effect, as indicated by improvement in the pulse and respiration, which, however, was not permanent. A stimulating enema of brandy and water was also administered.

After a lapse of four hours and a half, Dr. Cox saw the patient in consultation with me. At this time, the case was very unpromising. There had been no manifestation of consciousness; the pulse was irregular, frequent, and feeble; the pupils still contracted; the extremities cold and covered with clammy perspiration; and dissolution was apparently so near, that further efforts with hope of success seemed useless.

A flannel cloth saturated with aqua ammoniæ was now applied to the spine, and artificial respiration continued one hour longer, when normal respiration was resumed, and with it, was noticed a gradual return of consciousness. The following morning, his consciousness was perfect, although there was extreme nervous exhaustion, great mental depression, vomiting, loathing of food, etc., from which the patient gradually, but slowly, recovered. In the course of the day, an ounce bottle labeled laudanum, a few drops of which it still contained, was found concealed in the chimney flue, behind the damper. It was also ascertained that the patient had recently met reverses in business, and was laboring under pecuniary embarrassments, which doubtless induced that species of "moral insanity" that led him to contemplate suicide.

The points of interest in this case are, first, the manner of performing artificial respiration, which was in accordance with the directions of Dr. Marshall Hall, contained in the London *Lancet*, for recovering persons asphyxiated by drowning, viz.: by placing one hand upon the inferior and lateral portion of the chest, and the other upon the superior portion or shoulder, and rolling the patient upon the face, at the same time making moderate pressure, to force the air from the lung; the body was then rolled back, completing about one-third of a circle.* This was repeated slowly, sixteen times to the minute.

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* RULES.—1. Treat the patient *instantly, on the spot*, in the *open air*, freely exposing the face, neck, and chest to the breeze, except in severe weather.

The greater success which attends this mode of performing artificial respiration, Dr. Hall attributes to the fact, that when the body is placed in the prone position, the tongue falls forward, while in the old method with the patient in the supine position, it falls back into the throat, closing the glottis, and entirely preventing the ingress of air to the lungs.

The second point of interest is the manner of making dry friction of the extremities upwards along the course of the veins, forcing the

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2. Send with all speed for medical aid, and for articles of clothing, blankets, etc.

I.—To Clear the Throat.

3. Place the patient gently on the face, with one *wrist* under the forehead;

[all fluids and the tongue itself then fall forward, and leave the entrance into the windpipe *free.*]

II.—To Excite Respiration.

4. Turn the patient slightly on his side, and
   (i.) Apply snuff or other irritant to the nostrils;
   (ii.) Dash cold water on the face previously rubbed briskly until it is warm.

If there be no success, lose no time, but—

III.—To Imitate Respiration—

5. Replace the patient on his face, supporting the chest on a folded coat or other article of dress.

6. Turn the body very *gently*, but completely, *on the side and a little beyond*, and then *briskly* on the face, alternately; repeating these measures deliberately, efficiently, and perseveringly, fifteen times in the minute *only;*

[when the patient reposes on the thorax, this cavity is compressed by the weight of the body, and expiration takes place; when he is turned on the side, this pressure is removed, and inspiration occurs.]

7. When the *prone* position is resumed, make equable but efficient *pressure*, with friction, *along* the back; removing it immediately before rotation on the side;

[the first measure augments the expiration, the second commences inspiration.]

All these movements are performed systematically by the *same* individual.

IV.—To induce Circulation and Warmth—

continuing these measures:

8. Rub the limbs *upwards*, with *firm pressure* and with *energy*, using handkerchiefs, etc.;

[by this measure the blood is propelled along the veins toward the heart.]

9. Replace the patient's wet clothing by such other covering as can be instantly procured, each bystander supplying a coat or a waistcoat.

Meantime and from time to time—

V.—Again,—To Excite Inspiration—

10. Let the surface of the body be *slapped* briskly with the hand;

11. Or, let cold water be *dashed* briskly on the surface previously rubbed until it is dry and warm.

The measures formerly recommended and now rejected by me are,—the *removal* of the patient, as involving dangerous loss of time; the *bellows* or any *forcing* instrument, and especially the *warm bath*, as positively injurious; and the inhalation of *oxygen*, as useless.

The inhalation of dilute pure *ammonia* has in it more of promise.

The value of galvanism remains to be tested: can it excite the action of the *heart*, or stimulate the muscles of *inspiration;* or, by inducing contraction of the muscles of the limbs, propel the blood along the *veins?*"—*London Lancet, Dec.* 13.

blood towards the heart, as directed by Dr. Hall, the beneficial effects of which were too apparent to pass unnoticed.

The third point of interest is the length of time during which it was found necessary to keep up artificial respiration, it being full five hours and a half. From the partial examination which I have been able to make, I think it unusual for persons to rally who have been so thoroughly overcharged with narcotic poison, as to create the necessity for the continuance of artificial respiration so long a time. The details of but few cases are recorded, and I have noticed no instance in which artificial respiration was successfully performed for a longer period than four hours.

Dr. Peaslee remarked that this case of Dr. Lewis' was an extremely interesting one, as it is the first instance among us in which a practical application of Dr. Hall's method had been made. He considers this an improvement possessing advantages over all other methods of treatment, as we can by it introduce a greater quantity of pure atmospheric air into the lungs than by any other means, it being three-fourths as much as in normal respiration. Another advantage is that we have the means of operating always at hand, and the treatment may be pursued as well in one place as another, while other methods are subject to more or less delay in providing the necessary means. Each moment of delay is fraught with imminent peril to the patient. In restoring persons from drowning there is no time to be lost, for as long as the asphyxia continues the patient is in nearly as much danger as if he were still in the water, hence the necessity of prompt and energetic action. He is inclined to think favorably of the application of cold to the head, and heat to the extremities. If the pathology is congestion of the medulla oblongata, preventing impressions being conveyed through the pneumogastric nerve, our course should be to remove this congestion. He has made use of this treatment in cases of children poisoned with meadow parsley, and always with prompt effect. The medulla oblongata being the centre of the respiratory movements when it is disabled by congestion we should, in addition to removing the congestion, continue our efforts at artificial respiration until the cord resumes its function. Acting upon this principle, it would seem in theory, that if artificial respiration was continued long enough, these patients would all recover.

Infantile Pneumonia.—Dr. J. Lewis Smith read a paper on Infantile Pneumonia, of which the following is an abstract:—In the latter part of December last, Dr. Smith was called to visit an infant a few days old, who was born with two large blebs of pemphigus. The eruptions healed by a simple application, leaving reddish cicatrices, and nothing more was heard of the family till January 25, when he was again asked to see the child. The mother informed him that it had remained well from the date of his last visit till two days previously, when it began to cough, and that this symptom was gradually becoming more frequent and severe. The physiognomy of the little patient did not indicate much suffering, or a grave disease. He was lying on his back with respiration somewhat hurried, but its rhythm not materially disturbed, and the expiration not accompanied by a

groan as is common is the pneumonia of children. The resonance on percussion of the chest posteriorly was rather dull on both sides, and the respiratory sound feeble with distinct crepitation. The syrup of squills and counter-irritation were ordered.

January 26.—Symptoms less favorable. Pulse frequent and feeble; paroxysms of cough severe, and sometimes after them he lies several minutes without breathing, apparently from spasm of the diaphragm or larynx; little or no expectoration; the breast refused. Wine whey was ordered, but without improvement; and the following evening death ensued.

Autopsy.—Thoracic organs only examined. The anterior portions of the lungs presented a healthy appearance, but the posterior surface was mottled, some of the lobules being solid and having a dark red color. By strong insufflation these lobules, with the exception of a few, became crepitant, though somewhat still depressed.

This case derives its chief interest from the antecedents of the family. The father is suffering from syphilis—that most deplorable of all conditions for a married man—and the syphilitic taint has been transmitted to all his children. Four of these have died, and three are alive all scrofulous, except as they have been in a measure renovated by cod-liver oil. Of the four deceased, one died in convulsions consequent on the suppression of an impetiginous eruption of the scalp; and the other three, the case of one of whom is the subject of this paper, of a pulmonary affection, apparently the same in all, coming on at about the same age, and running a brief and similar course.

The following are the points of interest in the case:—1. The congenital pemphigus. This eruption existing at birth is regarded by dermatologists as a reliable sign of the syphilitic taint. Pemphigus then forms an exception to the rule as regards syphilitic manifestations, which do not usually occur till the infant is a few weeks old. 2. The nature of the disease by which the children, or at least the child, died. The diseased lobules, one after another, became crepitant by insufflation, but great force of the breath was required to effect this change. It is generally believed that if a lung, having the appearance of solidification from pneumonia, can be inflated, the morbid condition is not that of inflammation but collapse. A recent French writer, M. Bouchut, however, denies that inflation is a proof of collapse, stating that, in cases of undoubted pneumonia, he has often succeeded in blowing air into the vesicles of the solidified lung. It seems probable that the pulmonary cells, though containing the exudation of pneumonia, may be distended so as to receive air in addition. This is the opinion expressed to him by an eminent pathologist of this city, and if it be true, the ease, rather than the possibility, of inflation, must be considered the proof of collapse. That this child had pneumonia is evident from the fact that, notwithstanding very strong insufflation, a few of the lobules remained solid. These sank in water. He thought that by greater strength of the breath, they might have been made to crepitate like the rest. 3. As to the cause or causes of the disease. In Dr. Smith's opinion, the attack commenced in hypostatic congestion, induced by position. Position as a cause of pneumonia has been much

overlooked by physicians this side the Atlantic. In Europe it has engaged attention. Billard attributes the frequent occurrence of inflammation in the right lung of infants, in the Hospice des Enfants Trouvés, to the nurses placing them on that side; and Bouchut, speaking of pneumonia, remarks, "Who has not observed it come on among children just brought to a hospital under the influence of dorsal decubitus * * * * " In the adult, during the progress of asthenic diseases, pneumonia not unfrequently occurs as a complication, in consequence of the recumbent position; and, why may not debility and recumbency, in like manner, lead to pulmonic congestion and inflammation in the infant? In this child, Dr. Smith inferred, that the morbid process commenced in simple stasis of the circulating fluid, from his feebleness, from the latency of his symptoms (for latency is known to characterize pneumonia from hypostatic congestion), from the position of the diseased lobules, from his lying much of the time on his back, and from the fact that the disease was not preceded by bronchitis, as is usual in infantile pneumonia. 4. It is a little remarkable that three children in this family should die of the same age, and apparently of the same complaint; but if we regard the syphilitic cachexia as the predisposing cause of these attacks, we may perhaps understand the reason of this identity of time; for it is not generally till the infant has reached the age of a month that hereditary syphilis begins to produce an appreciable effect on the condition of the system.

February 9, 1857.

Hiccough.—Dr. Corson read a short paper on hiccough, based upon a case of diaphragmatic pleuro-pneumonia, treated by him and attended for three weeks with this distressing complication. He prefaced his remarks by saying, that any symptom, of however little importance in itself, that may, under any circumstances, cause the death of the patient, becomes a matter of serious consideration, and deserves the attention of this society. The case presented by Dr. Corson occurred in a man of about 57 years of age, who, after exposure to cold, was seized with severe chills, pain in the side and epigastrium, accompanied by great dyspnœa, dry cough, nausea, vomiting, constant wakefulness, and exhausting hiccough. He was at first treated with purgatives, assafœtida, sulph. ether, and afterwards with cupping, blisters, musk, and chloroform, which failing to afford relief, morphine was added to the list, at the same time supporting the patient with beef tea and wine. This treatment was continued, with little variation, until the ninth day of the attack, before sleep was obtained or relief from hiccough afforded. In reference to this subject, Dr. Corson remarked, that the above was the only case of which he had any knowledge, where the seat of the irritation was situated above the diaphragm; also, that its being protracted for the space of three weeks, and for nine successive days during this period the patient had no sleep, rendered it a case of more than ordinary interest. He mentioned that he had known several cases of protracted hiccough where the efforts of the physician had been repeatedly baffled, rendering the case exceedingly annoying to him, as well as distressing to the patient. He related the case of an Irish ser-

vant girl who, in consequence of fright, was seized with hiccough, which continued for about six months, during which time she was subjected to every variety of treatment, till at length a camphor moxa along the whole length of her spine caused such a shock as to frighten off the disease, as it had been frightened on: a good illustration of "*similia similibus*," etc. When this affection occurs in connection with inflammatory diseases, or low grades of fever, it becomes a very serious affair to the patient, and a source of great anxiety to the practitioner. Where the affection is purely nervous, he thinks musk and castor more particularly adapted to the treatment.

Dr. PEASLEE remarked that to him the subject was extremely interesting; there are often cases where it seems impossible to put a stop to it. In the case of the servant girl related by Dr. Corson, he would first direct his attention to the menstrual function; he does not remember of any case where the cause of irritation was above the diaphragm.

DR. SEWALL related a case of hemiplegia extending upwards until the stomach became involved, when hiccough supervened, and the patient died from gangrene of the stomach. He thinks this affection may be regarded as a symptom pointing to gangrene of the stomach.

DR. PEASLEE said that he had seen the affection gradually arrested by chloroform administered internally, in doses of fifteen drops in mucilage every twenty minutes.

DR. BULKLEY remarked that these cases occasionally occur in the New York Hospital, where they are usually treated with opium or morphine, or musk; he has never used chloroform, and has never known of a case proving fatal.

DR. CORSON remarked that he had forgotten to mention that his patient, during the chill, had drunk a large bowl of hot ginger tea, and the hiccough following soon after, it was at first supposed to result from that cause. He supposes that one reason why this affection so seldom attends diseases of parts above the diaphragm may be from the increased weight of the parts in congestion, or inflammation, or effusion, holding the diaphragm down, and thus preventing spasmodic action.

DR. PEASLEE remarked that this seemed quite reasonable, for if we distend the chest, the diaphragm is pressed down, and there it must stay till the pressure is removed. He thinks there is room for the question, whether the ginger tea did not cause the hiccough? This occurs in his own case; if he swallows any thing of that nature, hiccough is sure to supervene. The phrenic nerve having so many distributions, there are, probably, many different sources of irritation, from which this affection may proceed. From the little attention which he has given the matter this evening, he is inclined to make three divisions of hiccough. 1. From general nervous irritation. 2. Extreme debility of the nervous system, from want of vital energy enough to keep up a regular action, as in persons dying of fever, poison, hernia, etc. 3. Local irritation of some part contiguous to diaphragm, generally of the stomach. It is important that we discover the cause, as in one case no treatment will be necessary, while another may require local, and a third general treatment.

Cases of Puerperal Convulsions.—Dr. Sewall reported the following cases:—*Case* 1.—Mrs. K., æt. 21, of a full habit. About seven months gone with first child. For two or three weeks past has complained of throbbing headaches, with flushed countenance in evening, and so much heat that she has held her head under the running croton to cool it. In the morning has looked pale. Of late, has had anorexia, with sense of weight at epigastrium and occasional vomiting. Two days ago took salts, which were immediately returned. Is said to have vomited this evening, without any previous nausea. Bowels by report regular. Has been out of doors every day, and done her own work.

At nine P.M., was found lying, face downward, upon the bed in a spasm. At half-past nine found patient in husband's arms, violently convulsed, with eyes rolled up, frothing at mouth, muscular rigidity, and stertorous breathing. In two or three minutes a subsidence occurred of these symptoms, only to be renewed after an interval of five minutes, in which there was no return of consciousness whatever. The countenance was puffed; legs œdematous; and body generally anasarcous; pulse full, not hard, 100. After some six or eight spasms, during a period of half to three-quarters of an hour, without any gleams of consciousness, she was bled to o.ij. No spasm occurred from this to twelve, when one only appeared, although there was constant rolling of the eyes always to the right side, and occasional stiffening of the muscles of the neck. After the venesection, a stimulating enema was administered, which provoked free catharsis, and sinapisms were applied to ankles. At twelve, by advice, ten leeches were applied to temples, after which slight gleams of consciousness appeared.

May 2.—No paralysis, no paroxysm, but frequent rolling of eyes; swallows readily; consciousness very indistinct. Mercurials were ordered, from which a free dejection at noon occurred. At six P.M., was delivered without difficulty of a dead female child, well formed. Placenta came away readily, but no natural lochial discharge was ever established. After birth of child, much prostrated, with feeble pulse of from 80 to 100. Although re-action ensued, yet there was no apparent benefit to the patient six hours after parturition. Pupils dilated, contract feebly under light; consciousness very slight.

May 3.—Urine free, passed voluntarily after taking nitrous ether; appears brighter; can with difficulty be aroused to a slight recognition by signs of what is said to her, but soon relapses into dull heavy slumbers. Frequently exclaims, "I can't see," although hearing seems perfect, pupils equal; rolling of eyes to the right continues at times. Continue mercurials. Blister to nape of neck, to be dressed with strong mercurial ointment. Insists upon always getting out of bed to pass urine, or for her alvine evacuations.

May 4.—Good effect from blister; some show of consciousness, no paroxysm; no paralysis; slight rolling of eyes to right, for which inhales chloroform; slumbers much; pulse always regular, from 90 to 100, of good character; no nausea nor vomiting; mouth not sore. Omit calomel.

May 5.—Some nausea with retching, probably from chloroform; some return of spasmodic movements with turning of the eyes; is without sight, pupils dilated, contract sluggishly under strong light; pulse 90, regular. Calomel gr. i. every four hours. Has had two or three small dejections.

May 6.—A strong epileptic spasm at nine A.M., the first distinct one since Friday the 2nd; ten leeches applied to temples did not relieve, as the convulsions continued at short intervals. At four P.M., head was shaved and covered with a cap blister. At ten, blister had freely drawn. The convulsions were of varied severity, from one to two minutes duration, preceded by strong rotation of eyes upward and to the right, hiding the iris, characterized by spasmodic twitches of the neck also to the right, with frothing at the mouth, and followed by short stertor. These were continued at intervals of from ten to twenty minutes in P.M., and through the night. No convulsive movements of trunk or extremities accompanied them; bowels open; urine free; pulse 86 to 108; perspirations natural; tongue much swollen from a bite; very slight effect constitutionally from calomel. Continue it with mercurial inunctions to thighs; is taking also gr. i. assafœt. and valerian.

May 7.—Blister has discharged very freely; spasms occasional, with violence, and most severe when lying on right side; rolling of eyes perpetual. At three A.M., many severe convulsions. At two P.M., a very violent and protracted one occurred. From that time a favorable change ensued; pulse from 88 to 100 and 120, of natural force; respiration tranquil; no nausea; a free dejection after enema; blister dressed with mercurial ointment; refused medicine during day.

May 8.—Very quiet since three P.M. yesterday; some rolling of eyes again this morning; blistered surface dressed with basilicon; urine free; sight gradually returning; is conscious of external circumstances; takes a little nourishment readily; trifling movement of eyes in P.M.; answers questions by nods; pulse at five P.M., while sitting up, 104; some flushes of fever this P.M., with restlessness; had a movement from bowels after a mercurial purgative.

May 9.—As no decided constitutional effect had been procured from mercurials, they were further administered with that view, by inunction and otherwise, especially as a tendency to spasmodic movements is still apparent; pulse 90, soft and regular; sat up half an hour; is conscious and answers questions by nods; anti-spasmodics were continued.

May 10.—No further anasarca noted; no more change in the axes of the eyes; pulse 110; respiration easy; skin moist and warm; countenance calm and pallid; slept quietly all night, and awoke naturally; slight mercurial fœtor. Omit calomel.

May 11 and 12.—Improving; ptyalism well established; smiles and replies to questions; does not see perfectly clear; no further spasmodic movements of any sort; has an appetite.

May 13 and 14.—Ptyalism troublesome, with difficulty of deglutition and tumefaction of cervical glands. Takes sulphur and astringent washes. Complains of soreness of arms; upon right is a large purple discoloration near the point where venesection was performed, but not

involving it. There are no others upon any part of the body; no especial prostration is evident.

May 15,16, and 17.—Steadily improving; mouth clearing up; ecchymosed spot upon right arm has disappeared; pulse 100, soft, full; appears cheerful, talks freely and sits up occasionally; takes broth with relish.

May 24.—Sits up nearly all day; mouth about well; very cheerful and spirited with a great appetite; sleeps well; bowels well; pulse 86 to 90 during the week.

May 26.—Moves freely about room and abounds in good spirits; has no recollection of any thing that occurred during first nine or ten days of illness; reports no tendency to spasm in any of her family, and no illness ever before in her life, save a severe attack of diarrhœa nearly a year ago.

Three or four times during her sickness, and accompanying the spasms, a disposition to laughter was observed, as if an hysteric element was mingled with the epileptic.

Case 2.—Margaret M., æt. 29; German.—November 14, 1856.—Aborted about the sixth month of pregnancy, having been engaged just previously in collecting coal; a well-formed fœtus and appendages were removed by husband.

November 16.—Was seen by a German physician on account of convulsions, for which Hoffman's anodyne was administered.

November 17.—Found patient on her back in a state of insensibility, from which she could not be aroused. The pupils were dilated, and only partially contracted by strong light. Abdomen was soft, without tenderness, and the lochial discharge was well established. Pulse soft, about 100; countenance pale; many convulsions of an epileptic character was reported as having occurred during the night, affecting chiefly the right side. A blister was ordered to nape of neck; cathartic of oil, and anti-spasmodics.

November 18.—Blister has drawn well; convulsions less severe; oil had operated.

November 19.—Appeared better; is for the first time conscious; nods her head to queries; protrudes tongue for the first time on being asked; convulsions fewer, and less severe; left arm paralyzed; pulse continues soft, but more rapid; in one breast has considerable milk; lochial discharge continues; may continue anti-spasmodics.

November 20, 21, 22.—Gradual returning to consciousness, with hysterical symptoms; loud crying and laughing at intervals; mild purgatives were continued with the anti-spasmodics; nourishing diet was well taken.

November 24.—Appears much better; is fully conscious, and reports very favorable; is regaining the use of left arm.

November 25.—Was summoned in haste at ten A.M.; learned that patient had gone on doing well till evening, when the convulsions returned with violence, and continued with very brief intervals through the night; is now in a paroxysm, and has been for an hour; violent twitching of right side of the body, and limbs of same side, with frothing at the mouth, and rolling of the eyes; pulse 120, full, approaching hardness; venesection to ℥xxx.; after this the convulsion

gradually ceased, and shortly disappeared. Chloroform was given internally. At three P.M., found her in a deep, but tranquil sleep, which had continued for three hours.

November 26.—Reports better; is conscious, and has had no more convulsions.

November 29.—Is quite restored, and smiled upon me at the morning visit.

In this case, no œdema was any where noted.

Dr. BULKLEY remarked that the first case reported by Dr. Sewall, was a highly interesting one. He thinks the affection of the sight resembles those cases of amaurosis, which sometimes accompany albuminuria, a condition of the kidneys in which it does not answer to give mercury. He sometimes uses blisters; he mentioned the case of a patient who had several relapses of this disease from exposing himself to cold while undergoing diaphoretic treatment. At each relapse, there was trouble in the head, and speedy relief followed the application of the blister. At one of these exacerbations, a blister was ordered, and the next morning the patient found better, but it was ascertained, on inquiry, that the patient had fallen asleep before the time for applying the blister, and recovered from the pain in the head without it. In all these cases our attention should be directed to the kidneys. Convulsions depend upon uremia, whatever may be the cause, whether fatty degeneration or desquamation, or simple congestion of the kidneys. In puerperal women, he thinks there is no desquamation, but wished to hear the views of the president on this subject.

Dr. PEASLEE agreed fully with Dr. Bulkley, and repeated in substance the remarks that he had previously made, and which are recorded in the minutes of the December meeting, at which Dr. B. was not present.

PART SECOND.

CRITICAL ANALYSIS.

ART. IX.—*Pathological and Clinical Observations Respecting Morbid Conditions of the Stomach.* By C. HANDFIELD JONES, M.B., etc., etc. London, John Churchill, pp. 225.

As the volume before us is not likely to be reprinted in this country, an abstract of its contents may interest those who note the efforts made to advance our knowledge of this important class of diseases. Such a work, from so well-known a pathologist, must command that respectful attention due to the careful observer at the bed-side and dead house. The principal facts were published in the *Transactions of the Medico-Chirurgical Society*, and are intended to be so presented in this book, as to interest the beginner as well as the proficient. Still, as we must now read while we run, it is to be regretted that reference to the contents had not been facilitated by a better arrangement of the captions or headings of the pages, for, however sound the matter, the style is so condensed and unrelieved as to demand every aid from the printer.

The author must not be held responsible for the manner in which the fine illustrations accompanying the work are disposed; for instance, those displaying the healthy structure of the stomach, are placed midway in the second of the four pages devoted to the subject, and then surrounded with drawings of patches of inflammation, fatty degeneration, and congestion, in an embarrassing manner to the student of these microscopic appearances.

The book is divided into four chapters, with a short appendix and index:—

Chapter I.—Anatomical Description,	. . .	page 1
" II.—Physiology,	. . . . .	" 25
" III.—Pathology—Morbid Conditions,	.	" 56
" IV.—Clinical Observations,	. . .	" 171
Appendix,	. . . . .	" 222
Index,	. . . . .	" 225

Chapter I.—The feature of this book is the endeavor to trace the relations between diseased and microscopic change in structure. A thin vertical section from the stomach of an animal recently killed, viewed by a power of 40.60 diameters, presents the following appearances proceeding from above downwards.

"First, there is a layer which is more translucent than that below, extending through about one-fifth of the vertical diameter of the mucous membrane. This is so arranged as to form folds and laminæ, which

include spaces, and presents a rather irregular, wavy upper margin. The laminæ are marked by minute striæ, vertical to the surface on which they are set. This layer passes rather gradually into that below. It is the columnar epithelium, which after a short time falls off, and leaves bare the basement membrane on which it rested.

The individual particles are elongated, and contain an oval nucleus in their interior; their free extremity is flat, their attached often pointed. They adhere to each other by their sides, and often form large flakes by thus remaining after they have been detached from the basement membrane. These particles are continued downward a little way, as a tubular lining to the commencement of the follicles, and seem to change rather gradually into the cell-growth which occupies the tubes. These tubes extend downward in a tolerably straight direction to a layer of condensed fibrous tissue which may be termed the corium on which their blind ends rest; * * * * * from the corium there passes off a very delicate atmosphere of fibrous tissue, which ascends upwards among the tubes, but is more distinct about their bases. This inter-tubular fibrous tissue seems to be most abundant in the pyloric region. If the blood vessels are congested, or filled with artificial injection, their branches may be well seen passing vertically upwards to open into a plexus of unusually capacious capillaries, encircling the orifices of the follicles, just beneath the basement membrane of the surface. The tubes are surrounded in their whole length by delicate straight vertical capillaries connected by cross branches, so as to form a plexus with elongated meshes. * * * * Below the corium, we come, lastly, to a small quantity of adhering sub-mucous areolar tissue which invariably contains fat cells, sometimes in large quantity. It is traversed by branches of vessels and sympathetic nerve-bands. * * * The nerves may be traced as far as the bases of the tubes. * * * In structure the tubes consist of an homogeneous membrane inclosing an abundant cell-growth. This membrane is continuous with that which invests the free substance of the mucous tissue, and may be regarded as an involution of it. * * * * * The cell-growth contained in the tubes consists of large well-formed cells, varying from $\frac{1}{1000}$ to $\frac{1}{2000}$ inch in diameter, with celloid particles, free nuclei, and granular and oily matter. The large cells contain a distinct nucleus, lying in a quantity of soft granulous substance, very often imbedding oil molecules in varying numbers. * * I do not think the formation of perfect cells is at all essential to the healthy and efficient condition of the gastric glandular epithelium. * * It appears to me as it does to Kölliker, that the tubes are generally *filled* with their epithelium, * * the epithelium lining the pyloric tubes is more made up of perfect cell-particles, and is more disposed as a lining to the tube, leaving in its interior a central canal. * * * * * * The solitary glands being essentially extra-tubular formations, their increase must take place at the expense of the true secreting structure, and must, therefore, be prejudicial to the efficiency of the organ, if it proceed to any great extent. * * * In vertical sections of the gastric mucous membrane in the human subject, where the columnar epithelium is constantly found detached, and the basement membrane exposed, there are not uncom-

monly found papillar eminences of varying length standing up from the surface vertically."

Our author distinguishes these from the true villi by pressure; which, by forcing on the contents of the tubes, shows that these eminences are really masses of altered epithelium protruding from the follicles. He says further on:—

"Whatever may be the condition of the epithelium in the deeper parts of the tubes, that which protrudes from the follicles, or is just ready to protrude, always consists of an uniform, coherent, granulous mass, the cells having become fused down into this state."

Chapter II.—Our author has twice repeated the experiments of Bidder and Schmidt on the digestive power of the intestinal secretion, and in both instances obtained corroborative results. He gives the details of the second. A half grown kitten was put under the influence of chloroform, and then the abdomen opened, and an incision made into the duodenum. A piece of lightly roasted mutton, included in a muslin bag, weighing together $20\frac{3}{4}$ grains, was placed in the lower part of the duodenum, and retained in place by a ligature between it and the incision, while a second ligature was applied to the upper part of the duodenum, just below the opening of the duct from the liver. Another piece of meat in a similar bag, and of exactly the same weight, was placed in the peritoneal cavity; intestine then replaced, and wound stitched. Kitten lived several hours, and found dead next morning. The bag in the intestine had lost fully one half its weight; the other had only lost three grains. Moreover, the piece in the duodenum showed much less of fibre under the microscope, and the remaining fibres much softer than those which had been in the serous cavity; the former broken down by pressure into an amorphous substance, the latter very little altered.

Chapter III.—is thus subdivided: 1. Passive Congestion. 2. Inflammation. 3. Hypertrophy and Atrophy of the Solitary Glands. 4. Atrophy of the Glandular Tubes, with varying amount of Fibroid Formation. 5. Mammilation. 6. Ulceration. 7. Changes in Epithelial Contents of the Tubes. 8. Softening of the Stomach. 9. Fibroid Thickening of Tissues subjacent to Mucous Membrane. 10. Cancerous Disease.

1. This is illustrated by the details of six cases of post mortem observations, the first five showing the cause to have been obstruction to the onward current of the blood, and the last being referable to simple atony of the vessels. In the collection of his observations, the author acknowledges his great indebtedness to the admirable post mortem records kept at St. George's and St. Mary's Hospitals. In Case No. 1, on laying the cavity of the stomach open, "the whole mucous surface was found of a dark deep blackish red, which soon became brightened by exposure to the air. The cavity was quite empty and contracted, the mucous membrane thrown into deep rugæ, beneath which there lay a small quantity of alkaline fluid mucus; this consisted of columnar and tubular epithelium. There was no mucus whatever covering the rugæ. In vertical sections the glandular tubes of the splenic, mid, and pyloric regions were found quite healthy, and

there was no interstitial exudation. The whole of the vessels were, however, thoroughly filled with blood; not only the larger vessels surrounding the orifices of the tubes on the surface, but also the long delicate capillaries running between and parallel to the tubes, and the straight vertical veins into which the capillaries open. At the surface, there were numerous spots of commencing extravasation of blood, which appeared to extend for a little depth below the basement membrane, but had not ruptured its texture (vide Fig. 30). More extreme congestion than existed in this case cannot be conceived. The absence of exudation in the gastric tissue, the fluid state of the blood, the dilatation and hypertrophy of the heart, the compression of one lung, and the extravasation into the other, the enlarged and cirrhotic condition of the liver—all make it certain that the extreme repletion of the vessels was from obstruction to the onward current of the blood, and not from active determination to the stomach; the alkalinity of the mucus probably depended on the exudation of some serum from the blood vessels."

In another case, the congestion was apparently of long standing, from disease of the heart, lungs, and liver, giving rise to disintegration of the tubes, from impaired nutrition, and causing "the production of pigment, as the hæmatine frequently exuded from the gorged capillaries, and underwent its usual change."

The following is the note of the condition of the stomach: "Surface of stomach, in splenic and mid regions, was very dark, almost black in spots; rugæ but feebly marked. Splenic region—tubes almost utterly broken up, and reduced to a mass of nuclei and granular globules, mingled throughout with black pigment globules. This change seemed to be a simple disintegration; there was no nuclear or fibroid formation, the tubular tissue was simply broken up, and loaded with black pigment. Mid region—tubes in a very great degree broken up, and their place occupied by different nuclei and cell stuff, with pigment. No nuclear deposits were seen; the basement membrane of the surface was very distinct, in both splenic and mid regions. Pyloric region—the villi were beautifully distinct, with their covering of basement membrane; but the tubes were utterly obscured, if not destroyed, by circumscribed and diffused nuclear deposits. There was no pigment in this part, etc."

We hope soon to see the day when the notes of a post-mortem examination of the stomach will no longer state, "much congested," or "apparently congested," while the simple fact remains that all appearances of congestion, to the unaided eye, may be of cadaveric origin.

2. Dr. Jones recognizes the existence of inflammation under two types—catarrhal inflammation, and gastritis,—intending by the latter term to describe an inflamed condition of the whole substance of the mucous membrane, not of the surface merely. "The anatomical characters of the former are distension of the capillaries, especially of the surface with blood and secretion, often very abundant, of an extremely tenacious, clear, or whitish, or bile, or blood-tinged mucus * * The mid, or pyloric, regions are the parts principally affected by catarrhal inflammation * * that the pyloric region is an especial

locus of catarrh is partly explained by the nature of its follicles * * which approach much nearer to simple mucous follicles. But when the mid region is also covered entirely, or in part, with abdominal mucus, it is manifest that a great change must have taken place in the action of its tubes, debasing their epithelial contents more or less from their function of furnishing the essential digestive principle, to that of heaping up an useless and inert, if not mischievous, product." Still, in the great majority of Dr. Jones' cases, there was no organic change to any considerable extent in the glandular structure of the stomach, so that it seems pretty well ascertained that after attacks of catarrh, the organ may regain all its integrity and functional power. Acute idiopathic gastritis has not been met with by our author, who introduces a case of Andral's, and the results of two experiments, with arsenic on cats. Two cases are given, in one of which the weakened stomach was inflamed by the irritation of a neighboring cancerous growth; the other from an enormous quantity of sub-peritoneal scrofulous deposit. In the former, inflammation had chiefly affected the solitary glands.

3. The chief results of our author, in relation to hypertrophy of the solitary glands, or "nuclear masses," as he prefers to call them, may be thus recapitulated:

(*a*) "It is of the nature of an interstitial growth, spreading among the proper elements of the tissue, and inducing their atrophy. (*b*) It is generally combined with more or less of fibroid stroma, which in allied instances comes to predominate. (*c*) Its formation is gradual and latent, announced by no symptoms that have as yet been detected. (*d*) Age certainly seems to favor its development. * * (*e*) It is impossible not to notice its resemblance to certain changes, * * * consisting most essentially in interstitial fibroid formation, with wasting of the natural tissue. * * * Cirrhosis, etc., are typical instances of this kind, and Bright's disease is, in my opinion, of the same family. (*f*) * * * As a fibrous or sarcomatous tumor springs up in a certain locality, we know not how or why, so I believe do these low-organized growths develop themselves under invisible influences, of which one probably is the failing assimilative power of the normal tissue" The gradual nature of the change, the compensatory digestive efforts of the intestines, and the diminished sensibility to irritants of less highly organized viscus are believed by our author to account for the lack of symptoms of the change.

4. In this class of cases great destruction of the tubes of the mucous membrane occurs, replaced for the most part by a fibroid or granular matter, attributed by the author rather to depraved nutrition than to inflammation. The following extract gives an idea of these alterations—the patient died from exhaustion, with extreme anæmia. "Stomach: the mucous membrane was generally pale, but tinged yellow by bile, with a few vascular arborizations here and there. Two portions of the mucous membrane were examined and found gravely altered. In vertical sections no trace of the tubes was to be seen. The basement membrane still existed in some parts, in others it was lost; beneath it was a layer of fibroid tissue, containing at its lower part numerous fat vesicles. After the addition of acetic acid some

remnants of the tubes were brought into view imbedded in an indistinctly nucleated fibroid stuff. One of these appeared as an imperfect tube slightly bulged at its lower part; another as an oval cyst with a short truncated neck; another as a spherical cyst, containing some granulous matter and oil molecules. The tube and oval cyst contained only an indistinct granulous or granulo-fibrous matter."

5. Dr. Jones' observations have led him to believe that contraction of the muscular coat has nothing whatever to do with the production of mammillation. It throws the mucous membrane into folds, but does nothing more. He is also satisfied from experiment that the appearance may be easily produced in healthy gastric mucous membrane; and believes "that the organic change which takes place in marked morbid mammillation is an atrophic, and not the opposite, even in appearance. The diseased part is manifestly thinned and not thickened, and it is the shrinking in of this part which leaves the more healthy, prominent, and forming mammillations."

6. The details of eight post-mortem examinations are given of this interesting lesion, performed in the same thorough manner as the others which we have noticed. The ulcers were found in only two instances in the stomachs of females, and none of the subjects were under 48 years of age. In one case, "the ulcers occupied an unusual locality, being situate on the confines of the splenic region, instead of in the pyloric. In four of the eight cases, the mucous membrane of the stomach was found by microscopic examination (*the only sure test*) to be quite healthy in structure. In two the greater part was tolerably healthy, the pyloric region only, as is so commonly the case, being the seat of interstitial fibroid formation; and in two the mid and pyloric regions were considerably diseased. From this, it is sufficiently clear that general degeneration of the mucous membrane, spoiling and wasting of its tubes, contributes nothing, in the way of casual agency, to the ulcerative process * * there remains only one case in which there was not some tolerably sure indication of general or local failure of vital powers in other parts besides the stomach * * The ulcerative process in the stomach seems to me to resemble very strongly that which takes place in the cornea, in cases of deficient general power. There is manifestly an arrest of the normal assimilative action, the natural tissue is not nourished, but deliquesces, and is absorbed, or flows off. The more clean cut and level the edges, the less is there any reparative effort. Raising and tumefaction of the margins in the mucous membrane—which is free to move—and opacity from deposition of plasma in the transparent cornea, are the evidences of repair having commenced." In one case, "adhesions existed around the upper and left portions of the stomach, uniting it to the left lobe of the liver, to the spleen, to the diaphragm and to the commencement of the descending colon. These adhesions were evidently caused by an old ulcer of the stomach, as shown by a long and puckered cicatrix passing transversely across the cavity, and contracting it in an hour-glass fashion"—certainly an encouraging result. A very interesting case is given of a man aged 82, who died from perforating ulcer,

through the "anterior surface of the stomach, near the pylorus. The perforation externally is circular, with sharp, clean, well-defined edges, seven-sixteenths of an inch in diameter. It lies one inch to the left of the pylorus, and three-quarters of an inch below the large curvature * * Several vessels were found in the base of the ulcer, safely sealed up, and no hæmorrhage from the stomach ever occurred." This man had suffered from "heart-burn" for the last thirty years, for which he had been obliged to carry magnesia about his person. It does not appear that he had ever vomited. His chief symptom was burning, deep-seated pain behind the sternum, which became very severe when the stomach was distended. There was but little trace of degenerative disease in other organs, and the stomach in particular was unusually healthy.

7. (*a*) Fatty degenerations; (*b*) simple wasting; (*c*) black discoloration. (*a*) "It is not unfrequent on examining the mucous surface of the stomach, to find a patch of variable size, as large, perhaps, as the palm of one's hand, of a dull, dead, white aspect, contrasting very much with the surrounding grayish tint of the healthy membrane. The white color of the patches depends on fatty degeneration of the epithelium of the tubes. * * * There seems some reason for considering the fatty change in the glandular structure of the stomach to be akin to, and sometimes concurrent with, the fatty change in the liver. It is quite clear that it is not an indication of gastritis. The occurrence of much oily matter in the epithelium of the lower part of the tubes is not to be regarded as a morbid state. A fatty state of the epithelium is often observed also under other circumstances, especially on the pyloric region. When the upper parts of the tubes become more or less completely obliterated, and the lower are thrown together into groups, the epithelial contents of these parts become remarkably opaque and fatty. * * (*b*) Simple wasting shows itself generally not so much by manifest diminution of the quantity contained in them as by alteration of its particles. * * * (*c*) Black discoloration of the epithelium depends upon the presence of pigmentary matter in the form of various sized grains or granules within the tubes. These are accumulated in greatest number in the lower blind ends of the tubes. Interstitial deposit of the pigment may co-exist with this state or be absent. * * * Three degrees of energy in the nutrition of the epithelium seem to be marked by the situation of the black matter; the lowest is that in which the pigment is deposited solely between the tubes or indeed mingled with their dèbris; the next is that where the pigment lies at least partly within the tubes mingled with the epithelium, and perhaps replacing it to some extent; and the third is marked by the presence of the pigment actually in the interior of the cells. * * * I believe them (fatty degeneration and wasting) to be simply examples of mal-nutrition. With regard to black discoloration, I think the evidence is very strong that hyperæmia is essentially concerned in it, at least in most cases; but at the same time where there is no intertubular exudation, and the tissue retains its normal structure, I should look on the occurrence rather as an instance in which the normal nutritive action had been modified by a perturbing cause, viz.: the exuda-

tion of hæmatine containing fluid, rather than as an indication of actual inflammation."

8. (*a*) "There are two forms of softening, one the commonest by far, which is simply the result of the action of the acid contents of the stomach on its own dead tissue; the other, the consequence of a peculiar change taking place in its glandular structure, which generates a powerful acid on the spot, corroding and destroying itself and the tissues beneath. (*b*) The latter form may occur either with an empty or full state of the blood-vessels of the stomach, the softened part of which will be either quite pale, or of a dark blackish tint. (*c*) This same form occurs in a great variety of morbid states, which seem to have only this in common—that they are attended with great depression of the vital power. (*d*) It is more common in children than in adults, on account of their greater delicacy, and less resisting power of their systems. (*e*) The parts of the mucous membrane undestroyed show no deviation from their healthy structure."

9. "There is nothing very distinctive in the symptoms which are produced by thickening of the walls of the stomach * * the discovery of a tumor will be the chief. * * Dr. Hare observed that over the greater part of the resisting man, though not over the whole of it, there was some resonance on percussion. * * Emaciation marked in all Dr. Bennett's cases, and in Dr. Hare's."

10. "In none of the cases did the cancerous growth itself consist of cells or corpuscles, that could have been declared positively to have belonged to a malignant tumor * * in the last case only there were cells in the submucous tissue, which differed decidedly from normal formation. * * These facts, as well as several others, seem to me strongly to intimate the little value that can be attached to any structural character, in considering the essential nature of cancerous disease. * * That which we can see is the least important; the invisible dynamic qualities are those which should chiefly engage our attention, as sound pathological inquirers."

Clinical Observations—Twenty-three in number, the first ten illustrative of disorders classed under the name of "gastric catarrh." wish the reader to think not so much of dyspepsia, whether atonic, inflammatory, or irritative, but of a state of the mucous membrane conveniently expressed under the term catarrh, passing through all the stages, and presenting all the varieties which it does in other situations. * * In its early stage, and in its exacerbations, it constitutes a large portion of the cases in which hyperæmia, or inflammation, is a prominent feature. In its later and less active stages it swells the class of those in which the secretion is more or less manifestly morbid. It appears to have for its opposite the common condition of nuclear interstitial formation, which proceeds so latently. * * Exciting causes * * all which in any way irritate the mucous membrane: indigestible food, stimulants in excess, atmospheric poison of catarrh, or that of syphilis, or rheumatism. Anatomical signs—congestion; secretion of viscid mucus, in varying quantity, and diminution or arrest of the healthy acid secretion. Blood may blacken the matters vomited; sarcinæ may form in the mucus which covers the surface, and lie there

without symptoms. In the acute period: tenderness at the epigastrium, pain referred to lower part of sternum, left side, or between shoulders, increased by food, sometimes notably by hot things. * * Later period: pain, aching, or a low sinking feeling, or a sense of uneasiness; * * irritability, sometimes so great as to find relief in vomiting alone * * tongue gives no absolutely certain indication * * thirst varies * * appetite differs—craving with irritation—rather deficient where there is much pain after taking food, and very much so when the membrane may be presumed to be in a relaxed atonic state * * Irritation to be met by sedatives * * water-brash, unattended by pyrexia, by astringents freely and without fear * * a peptic tonic sometimes given, to assist the weak organ in its labor. Three cases of probable ulceration are given, treated in nearly the same way, with marked improvement in all. The Dr.'s treatment is based on his views of the pathology of the disease, and is of an analeptic and tonic character, with the exhibition of nitric acid or tannic acid, and attaching more value to the observance of sufficiently long intervals between meal and meal, the exhibition of a peptic tonic (as lactic acid), and the improvement of the general health, than to the administration of ingesta, which may be supposed to be less irritating than others. * * * In a case of sub-acute gastritis, the Dr. derived great benefit from pushing mercury to salivation.

The space which we have occupied prevents us from detailing more of the clinical observations, and limits this notice to an abstract, rather than review. While it is a work temptingly open to criticism, there is yet a vigor and healthful professional tone in all its pages, delightful in these days of book-compiling for the advertisement of the author.

With the opportunities enjoyed by Dr. Jones, and his well-established habits of careful observation, we may confidently look to him for advance in this valuable field of research.

Meanwhile we trust that the careful manner in which his microscopic examinations of this organ have been made will attract renewed attention to the subject; for, be it remembered, the microscope alone can detect most if not all of these pathological conditions.

G. T. E., JR.

PART THIRD.

MEDICAL RETROSPECT.

Removal of a Uterine Tumor, together with extirpation of the entire organ and its appendages. By Wm. J. Baker, M.D., Knoxville, Tennessee.—A negress, married, but childless, has been occasionally under treatment since 1851, for inflammation of os uteri. Has always suffered from dysmenorrhœa, and has once been pregnant, but aborted within two months.

In October, 1855, felt a lump in right iliac region. In June, 1856, Dr. B. was called for symptoms of dysmenorrhœa and hysteria, with retention of urine. The abdominal tumor was then found to occupy all the hypogastric region and a portion of both iliacs, inclining decidedly to the right. Firm to the feel, somewhat movable, and reaching to within two and a half inches below the umbilicus. Examination per vaginam reveals a slightly nodulated surface, far back, between the promontory of the sacrum and the uterus; womb pushed forward, evidently retroverted; os high up behind the pubis; speculum cannot display the os, but all visible tissue apparently healthy. From this time until August she remained under treatment, with great suffering at the menstrual periods, and then constipation and inflammation of the rectum were added to her symptoms; and on the 13th of November removal of the tumor was decided upon.

Pain was then constant and excruciating; general health greatly impaired. The tumor resembles in size the gravid uterus at the seventh month. A well-marked protuberance in the right lumbar region, which can be moved as far as the mesian line, a distance of two and a half inches. To the touch the womb feels heavy, and offers some elastic resistance; surface irregular; sound can be introduced with difficulty to the depth of two inches. Mammæ enlarged; areolæ increased in depth and color, with secretion of milk. Depraved appetite and longings. Insists that she has felt motion as of fœtus in utero. Tumor certainly attached to the womb, but whether primarily or secondarily, could not be determined.

Patient anæsthetized with chloric ether, for which chloroform was substituted in consequence of the tardy action of the first agent. When insensible, an incision was made from the umbilicus to the pubes, through the linea alba; when the middle portion had been divided, the tumor protruded. On attempting to lift it, it was found necessary to extend the incision one inch and a half higher, avoiding the navel; the upper portion of the tumor could now be raised, and by turning out the bowels it was found to be attached to the sacral and lumbar verte-

bral regions, by pretty firm and extensive adhesion; it was also found that the uterus and ovaries were so involved that separation was impossible; indeed, the uterine walls "were hypertrophied and distorted, had become heterologous and a portion of the tumor. The ovaries were involved only from contiguity, the peritoneal covering adhering."

It was determined to excise the whole. The serous adhesions were torn or dissected up, the ligaments severed until the mass was attached only by the vagina as a pedicle; a needle, armed with a ligature, was now passed through the cervix, and the lateral halves tightly constricted; the cervix was divided immediately above the ligature, and the mass removed; the pedicle was brought to the lowest part of the incision and secured. Wound closed by the interrupted suture.

There was probably left of the cervix, from the os to the ligature, half-an-inch, section being made just above the junction of the vaginal walls to the neck. But one artery required ligation, viz.: left ovarian, when the broad ligament was cut. Venous hæmorrhage amounted to about ℥x. Tumor and parts excised weighed forty-six ounces, avoirdupois; its nature apparently fibrous, but a microscopical examination promised. Treatment by opium to narcotism, commenced as soon as the patient had come from the influence of the chloroform.

November 25.—Sutures removed, wound healing nicely.

November 29.—Pedicle ligatures come away.

December 3 and 4.—The days for her menstrual flow; marked aggravation of symptoms. Condition strikingly similar to that presented antecedent to, and during menstruation. There continued a free discharge of pus from the point where the pedicle was attached; and on Dec. 20, a string of dead areolar tissue was removed, measuring four and a half inches.

January 3.—Free from uneasiness; wound almost entirely healed; discharge slight; sits up, but not allowed to walk farther than from the bed to the arm-chair. She was to-day discharged.—*Southern Journal of Med. & Phys. Sci.* (*January.*)

Case of Gastrotomy.—Dr. Jno. H. Bayne, of Prince George Co., Maryland, reports a successful case of Gastrotomy in a robust servant woman, 25 years of age, in labor with her fourth child. Her pelvis was evidently contracted, and her labors had been lingering from this cause. She had now been in labor for two days, and Dr. B. was sent for, and told that the patient had experienced some hours before an excruciating pain in the epigastrium, accompanied with a peculiar tearing sensation; followed by entire cessation of pain, and expulsive uterine efforts; pulse 130, dyspnœa and prostration; os uteri fully dilated, vertex presenting, and high up. She soon became comatose, with great tendency to collapse. Head of fœtus seemed to be rapidly receding, and in a very short time the entire contents of the uterus escaped into the peritoneal cavity; child then felt distinctly through abdominal parietes, so high up as to interfere with the action of the diaphragm; vaginal examinations now recognized laceration through the fundus. The Dr. selected the operation of gastrotomy, and per-

formed it promptly without an anæsthetic. He divided the parietes from the umbilicus to near the the pubes through the linea alba down to the peritoneum. This was cautiously opened, when a quart of sero-sanguinolent fluid gushed out. No hæmorrhage, but a large fœtus which was removed with great dispatch. No particular allusion to the placenta made. Wound united with interrupted sutures, and complete cicatrization took place in twelve days, notwithstanding symptoms of sharp peritonitis. For several weeks, a dark, grumous, purulent, offensive discharge flowed from the vagina, unaccompanied by constitutional disturbance.

In two months time she resumed her duties as cook.—*Am. Jour. of Med., Sci.* (*January.*)

Rupture of the Uterus.—Dr. C. M. Reynolds of Stateburg, S. C., gives the particulars of a case of Ruptured Uterus, with post mortem appearances:—A negress in labor with twins, (third confinement). First child (footling) born at ten A.M., after a rather tedious and painful labor of eighteen hours, when she complained of acute lancinating pain, of a fixed character, just above the symphisis pubis. At seven, P.M., the Dr. arrived and found one hand and fore-arm in the vagina, and felt the "anterior portion of the vertex" resting on the brim of the pelvis. The head retroceded on the slightest pressure. General symptoms were those of "great restlessness, countenance expressive of apprehension and anxiety; pulse rather frequent, and disposed to intermit; and excessive tenderness over the whole abdominal region." Ruptured uterus diagnosticated; and no manual or instrumental interference attempted. The patient died, but it is not easy to understand from the paper how long she lived after the Dr.'s visit. She is stated to have died "at seven o'clock in the afternoon;" but it is scarcely to be supposed that she was allowed to live for twenty-four hours unaided, and it is evident from the context that she did not die immediately after the Dr.'s arrival.

Autopsy.—Prolonged and forcible escape of air at the point of first incision, and consequent complete subsidence of the excessive distension. On proceeding, the first objects presenting themselves were the fœtus and the placenta; the whole of the former external to the uterus and in the peritoneal cavity.

Uterus found so contracted as to render it difficult to discover the rent until the hand was introduced per vaginam. Rupture in the anterior portion of cervix, and slightly oblique. Very little blood in peritoneal cavity, and no appearance of hæmorrhage during life. In the contracted state of the uterus the rent was about three inches. Some small amount of coagulated blood in the uterus. All other pelvic and abdominal viscera healthy. The Dr. thinks that he must have unconsciously passed his finger through the laceration, when he recognized the head. Pelvis not examined.—*Charleston Med. Jour. and Review.* (*January.*)

American Medical Association.—The tenth meeting of the association will be held at Nashville, Tenn., on Tuesday, May 5, 1857. All bodies entitled to representation in the association will very much further and facilitate its affairs by sending lists of their representatives at an early period to Dr. Robert C. Foster, *Secretary of the Amer. Medical Association*, Nashville, Tenn.

At the last annual meeting held at Detroit, the following resolution was passed :—*Resolved*, That any new medical institution not heretofore represented in this body be required to transmit to the Secretary, with credentials of its delegates, evidence of its existence, capacity, and good standing.

New York Academy of Medicine.—At the annual meeting of the academy on the 7th of January last, the following officers were elected for the ensuing year :—

For President—Dr. Valentine Mott.
For Vice-Presidents—Drs. J. R. Wood, Beadle, Barker, and Wilson.
For Recording Secretary—Dr. C. F. Heywood.
For Assistant Secretary—Dr. F. U. Johnston, Jr.
For Domestic Corresponding Secretary—Dr. Hubbard.
For Foreign Corresponding Secretary—Dr. J. W. Green.
For Treasurer—Dr. J. O. Pond.
For Librarian—Dr. T. F. Cock.
For Trustees—Drs. Kissam, Blakeman, Anderson, Griscom, S. P. White, Carter, and Ogden.
For Orator—Dr. J. Marion Sims.

New York State Medical Society.—The annual meeting of this society was held at Albany on the 3rd of February. The meeting, we learn, was one of unusual interest, being the semi-centennial anniversary.

The following officers were elected for the ensuing year :—

For President—Dr. Augustus Willard, of Chenango.
For Vice-President—Dr. Thos. C. Brinsmade, of Rensselaer.
For Secretary—Dr. Sylvester D. Willard, of Albany.
For Treasurer—Dr. John V. P. Quackenbush, of Albany.

Drs. John Ralph, of Montreal, and Henry J. Hunter, of London, were elected honorary members of the society.

An elegant entertainment took place at the Delavan House.

New York Pathological Society.—At the annual meeting of this society, the following officers were elected for the year 1857 :—

For President—Dr. James R. Wood.
For Vice-Presidents—Drs. Clark and Bolton.
For Secretary—Dr. E. Lee Jones.

☞ *To Readers.*—The unexpected length of articles in the original and hospital departments of this number has crowded out our usual variety of retrospect.

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